OCTOBER 1961
Volume 51, Number 10

JOURNAL OF THE AMERICAN PODIATRY ASSOCIATION

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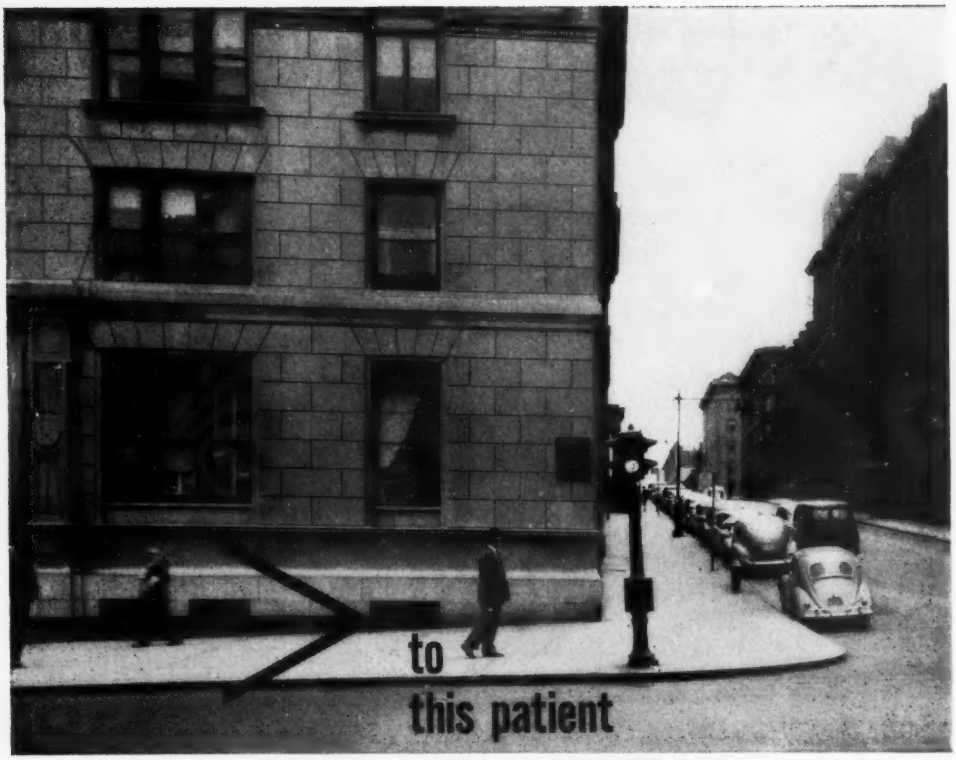

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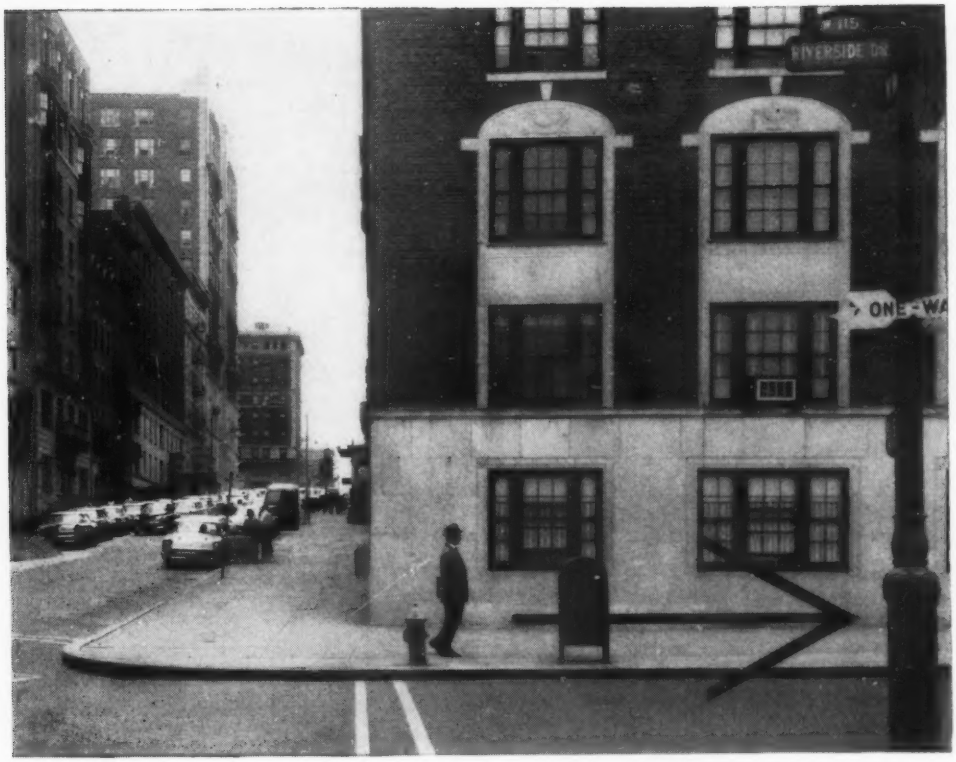

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Deadline for **Journal** copy is the 10th of the month preceding the month of publication. (Example: copy for June issue should be in the editorial offices by May 10th.) The **Journal** is usually mailed between the 10th and 15th of the month of issue (the June issue is mailed between the 10th and 15th of June).

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Subscription is included in the annual membership dues of the American Podiatry Association. The subscription rate for non-members is $10.00 a year in advance ($1.50 additional for foreign postage, exclusive of Canada, Cuba, Mexico). Single copies $1.00 each. Remittance should be made payable to the American Podiatry Association, 3301 Sixteenth St., N.W., Wash. 10, D. C.

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Indexed in Index Medicus, formerly Current List of Medical Literature, National Library of Medicine.

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The Journal of the American Podiatry Association is published monthly and copyrighted in 1961 by the American Podiatry Association.

Entered as second class matter at the P. O. at Boston, Mass., March 27, 1934, under the act of March 3, 1879, re-entered March 3, 1958. Publication office, 375 Broadway, Boston, and Editorial Executive offices, 3301 16th St., N.W., Washington 10, D. C.

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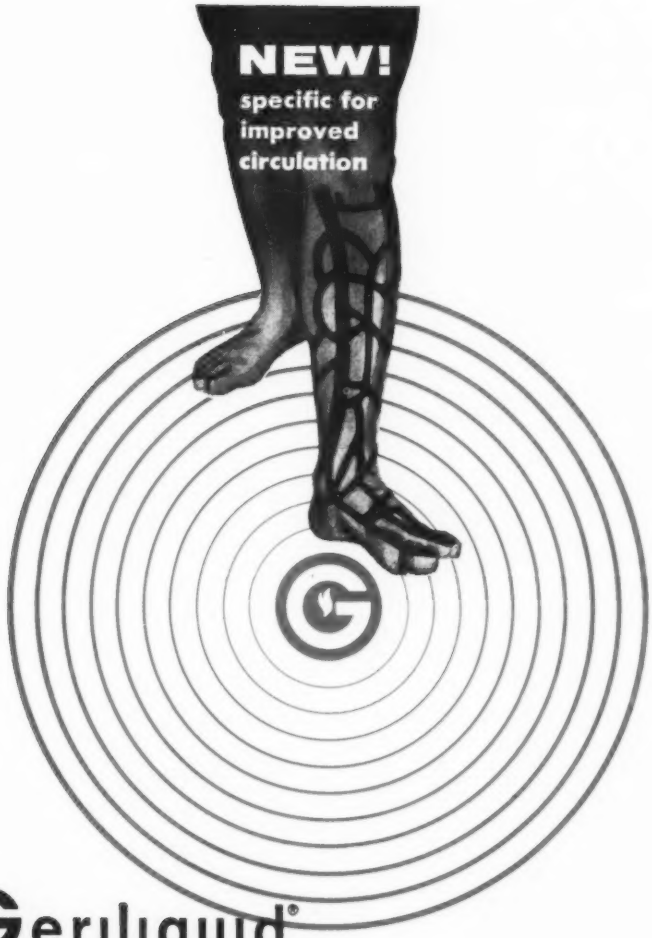

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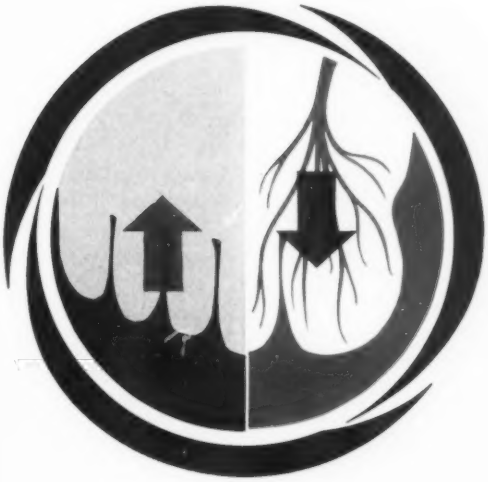

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Academy of Podiatry—Louis Lewy, 285 Madison Ave., New York, N. Y.
American Podiatry Council—L. J. Friedman, 1186 Broadway, New York, N. Y.
Fellows Pedic Research Society—Irving M. Sward, 4948 W. Dempster Rd., Skokie, Ill.
American Foot Health Foundation—Sidney Hirschberg, 107-07 Continental Ave., Forest Hills, N. Y.

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1. Sokoloff, O.: A.M.A. Arch. Dermat. and Syph. *64*:754, 1951. 2. Van De Erve, J.: A.M.A. Arch. Dermat. and Syph. *68*:572, 1953. 3. Bleiberg, J.: personal communication. 4. Tobey, J.: personal communication.

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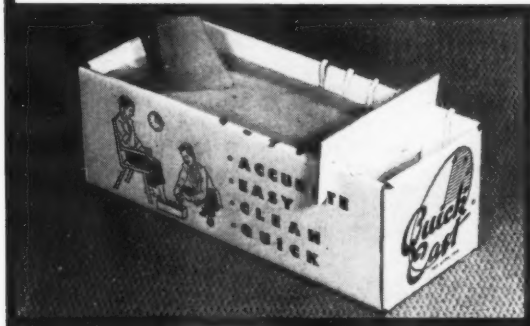

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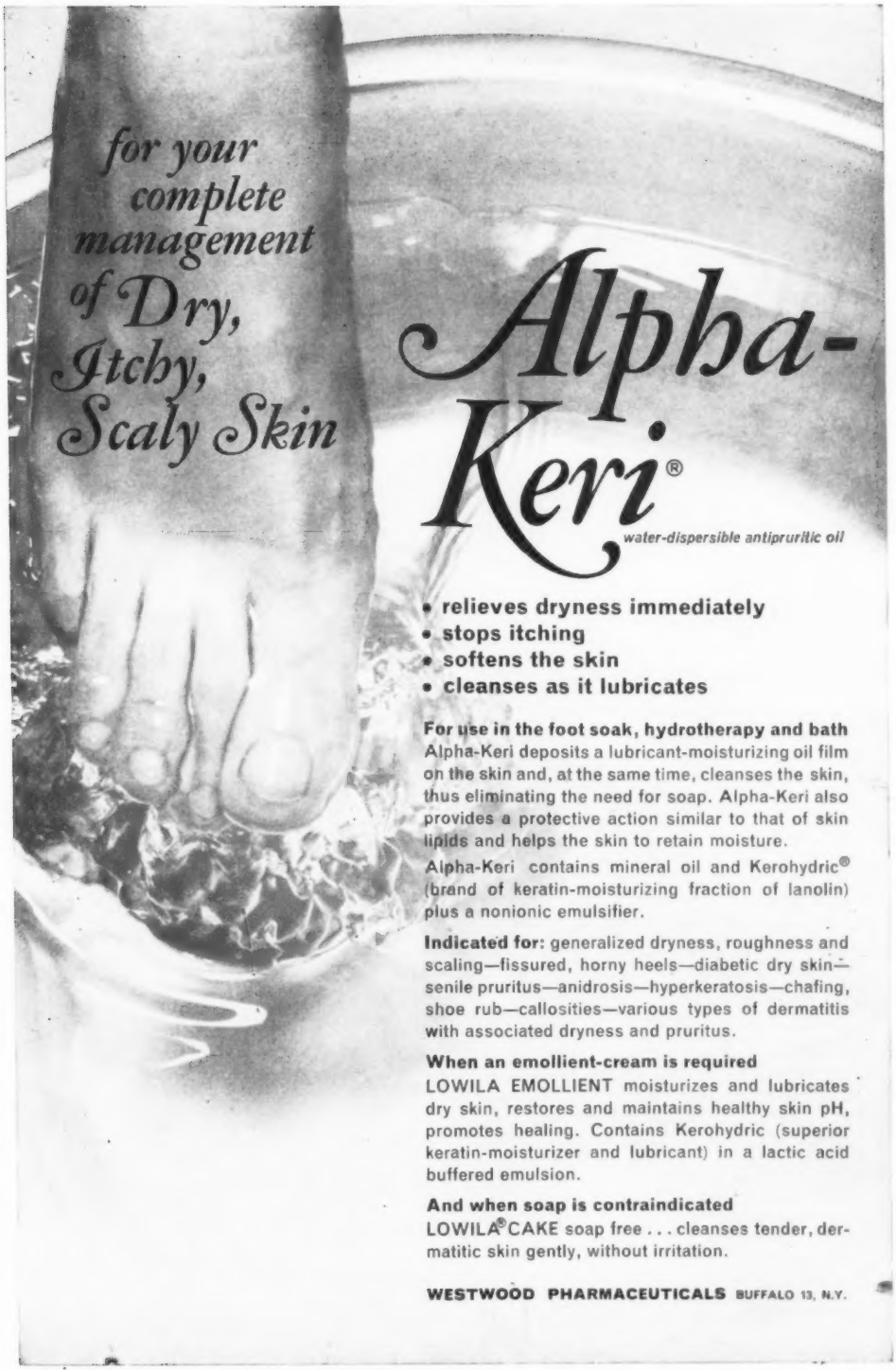
*Walker, M. H., Rubefacient therapy for the feet, *Journal of the American Podiatry Association,* vol. 50, Oct. 1960.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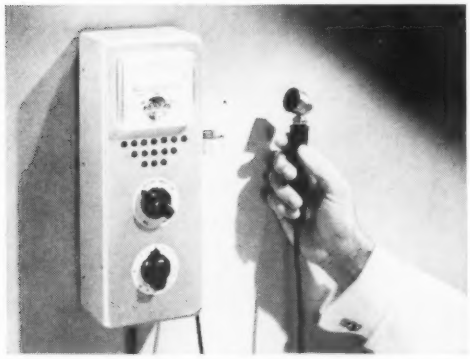

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JOURNAL
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The Official Publication of the Podiatry-Chiropody Profession

VOLUME 51 OCTOBER 1961 NUMBER 10

New Uses of Chymotrypsin in Podiatry*

Frederic B. Streiker, D.S.C., F.A.C.F.O.†
Broadview, Ill.

Introduction

THIS paper deals with the use of chymotrypsin in podiatry and discusses the infiltration, intra-articular, intramuscular and oral uses of chymotrypsin in 864 patients. Two of these methods of administration, namely the infiltration and intra-articular uses, to the best of our knowledge, have never been previously reported in this country.

The importance of enzyme therapy has steadily risen in recent years with particular attention being focused on the natural pancreatic enzymes chymotrypsin and trypsin. I became interested in the use of chymotrypsin in podiatry in 1958.

The infiltration use of injectable chymotrypsin was suggested to me by the work of Barraquer[1] of Spain, who reported that chymotrypsin had a lytic effect upon zonules and thus facilitated lens removal in cataract surgery.

The intra-articular use of chymotrypsin was stimulated by the report of Sola and Barcelo[2], who used a solution of chymotrypsin intra-articularly in the treatment of periarthritis of the shoulder. The use of chymotrypsin in surgery was predicated on the reports of physicians that the enzyme was a useful anti-inflammatory agent in thrombophlebitis[3], athletic injuries[4,5,6], surgery[7,8,9], and dermatology[10].

For many years we thought of these enzymes only in terms of their digestive properties. But now a considerable body of clinical and experimental evidence has accumulated identifying chymotrypsin as a potent agent for the treatment of inflammation, ecchymosis and edema (other than that of renal or cardiac origin).

The selection of chymotrypsin over trypsin for this study was governed by certain qualitative differences between the two enzymes. Hendley, et al.[11] assert that chymotrypsin is a preferred anti-inflammatory agent because it does not produce clotting and is less toxic; Miechowski and Ercoli[12] maintain that chymotrypsin has a greater anti-inflammatory action than trypsin.

* Bronze Award winning paper in the William J. Stickel Awards for Research in Podiatry-Chiropody for 1961. Presented at Annual Meeting of the A.P.A., held at the Americana Hotel, Miami, Fla., August 1961.

† Chairman, Research and Scientific Committee, Chicago College of Chiropody and Pedic Surgery.

We have been ever alert, too, to the search for an anti-inflammatory agent that did not have the drawbacks of the corticosteroids. Though the steroids, such as hydrocortisone and prednisolone, have had a wide usage in the past few years, they are known to cause undesirable reactions such as inhibition of pituitary gland function, diminished resistance to infection, hypertension and psychopathologic changes. No such side effects have been noted with chymotrypsin. Davis, et al.[13] reported that clinically they believed that the effect of chymotrypsin exceeded that of trypsin and paralleled that of prednisone in treating bruises and sprains. They felt, too, that hematoma responded more quickly to chymotrypsin than to either of the other two agents. A desire to evaluate a safer anti-inflammatory agent was further stimulated by the development of a Charcot's joint following intra-articular injections of hydrocortisone.

The mode of anti-inflammatory action of chymotrypsin and trypsin remains to be clarified. There are a number of theories such as, (a) administration of the enzymes helps to restore a disturbed balance of the enzyme systems to normal function, and (b) a fibrinolytic effect removes the tiny fibrin clots which block the blood vessels surrounding a lesion, thus increasing local circulation and removing the inflammatory barrier, resulting in a more rapid dissolution of the pathology.

Materials and Methods

The chymotrypsin preparations used throughout these studies were an injectable solution‡ and an oral tablet‡‡. The oral tablet was used as adjunct therapy to the injectable preparation, particularly when the latter was administered intra-articularly and when used in foot surgery.

In our earlier infiltration and intra-articular studies, we combined an equal amount of a local anesthetic with the chymotrypsin solution on the assumption that injection of the enzyme alone would be painful or irritating. Subsequent studies, however, proved that the addition of an anesthetic agent was unnecessary. Any noted stinging was transitory. Indeed, the distension of tissues caused by this additional volume of anesthetic to chymotrypsin solution, in itself, seemed to be responsible for any discomfort noted. Only when large areas or joints are involved, is consideration given to the combined use of a local anesthetic. Strict aseptic techniques were always observed.

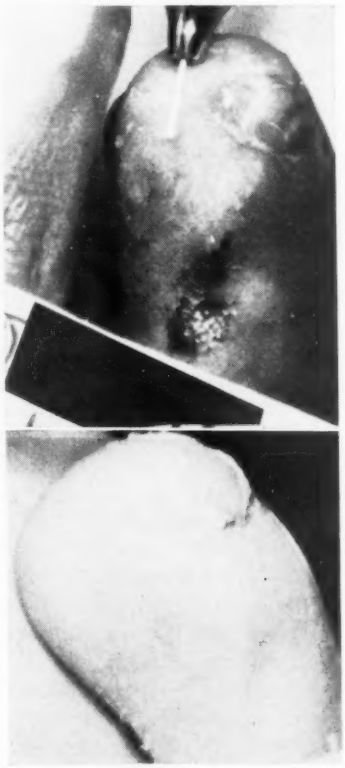

Fig. 1—Heloma molle, fifth toe, male, age 51, duration 12 months. Lesion 0.5 cm. x 0.5 cm. Previous therapy—reduction of excrescence. (Upper) Lesion at time of first infiltration. (Lower) Lesion 6 weeks after start of therapy, 1 week after fourth infiltration, lesion healed.

Infiltration Use of Chymotrypsin

The solution of chymotrypsin was administered in amounts varying from 0.1 to 0.2 cc. Injections were made directly under the lesion, using a number 25 or 26 gauge needle (⅝" or ⅜"). Injections were made

‡ Chymar Aqueous and ‡‡ Chymoral Tablets, by Armour Pharmaceutical Co., Kankakee, Ill.

in a flat plane of 180 degrees. Infiltrations were repeated at weekly intervals as necessary. (Fig. 1.)

The conditions treated and the number of patients in each group were:

Heloma Durum	48
Heloma Molle	70
Heloma Miliary	34
Heloma Neurofibromata	26
Onychocryptosis	57
Nucleated Tyloma	140
Trauma	71
Verruca	3
Total	449

All cases of helomata were carefully selected upon the basis that they were free of exostosis and were of a purely pathomechanical nature.

Patients were of both sexes and in age ranged from 14 to 68 years. They were composed of private patients and clinic patients.

Intra-articular and Bursal Use of Chymotrypsin

The chymotrypsin solution, the same preparation as used for infiltration, was used in the following amounts: small joints (Fig. 2) were injected with 0.1 to 0.2 cc.; hallux valgus 0.2 to 0.4 cc.; the ankle joint with 0.5 cc.; and bursal sacs with up to 1.0 cc. A pressure bandage was applied after the injection. Injections are repeated at weekly intervals, as necessary.

When fluid is present it is first aspirated with a number 18-19 gauge needle—the needle is left in place and another syringe is used for injecting the chymotrypsin solution. The amount injected was equivalent to the amount of fluid aspirated.

The conditions treated were sprains and strains, fractures, bursitis, hallux valgus, metatarsalgia and arthritis, and painful toes of unknown etiology.

Patients were of both sexes and in age ranged from 18 to 68 years. They were composed of private patients as well as clinic patients.

The joints injected and the number of patients in each group are summarized as follows:

Fig. 2—Intra-articular chymotrypsin for arthritis. Using a 25-26 gauge needle ⅝", the approach is made at a 90° angle, with the articulation spread and 0.2 cc. is injected into the joint space between the middle and distal phalanx. Aseptic technique is observed.

Interphalangeal Joints	98
Metatarsal-Phalangeal Joints	107
Tarsal Joints	35
Angle Joints	50
Total	290

After intra-articular or bursal injection of the chymotrypsin solution, the patient was given a prescription for 8 oral tablets, with directions to take two tablets four times daily. For maintenance dosage the tablets were administered one tablet four times daily.

Use of Chymotrypsin in Surgery

During the past year, we have been administering chymotrypsin aqueous intramuscularly immediately after foot surgery. This is the same preparation which we use for infiltration, intra-articular and bursal injection. I prefer to inject the solution into the upper outer one-third of the thigh with the patient in the recumbent position. A second area of choice is the upper outer quadrant of the gluteus maximus. The injection is supplemented by administration of chymotrypsin oral tablets. (Fig. 3.)

The dosage of the injectable preparation is 1 cc.; that of the tablets is two tablets four times a day with maintenance therapy

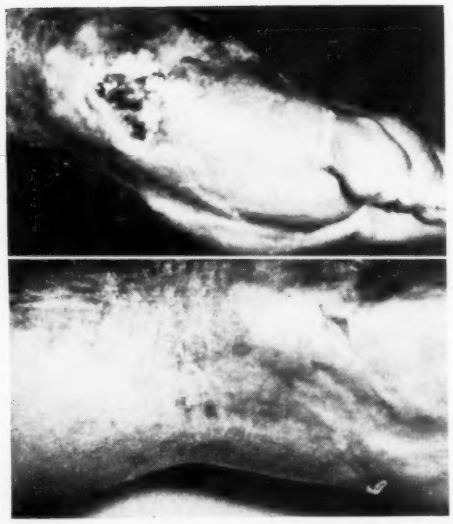

Fig. 3—Amputation of fifth toe and head of fifth metatarsal, female, age 23. Infection followed surgery and when first seen, 7 weeks after original surgery, the wound measuring 3 cm. x 4 cm. was infected and ulcerated (upper). Patient was placed on chymotrypsin therapy: chymotrypsin aqueous solution 1 cc. intramuscularly at weekly intervals for 7 weeks along with chymotrypsin oral tablets 2 q.i.d. (Lower) Lesion 7 weeks after chymotrypsin therapy instituted, healing complete.

at the level of one tablet four times a day.

A total of 125 cases so treated are reported in this study. The patients ranged in age from 11 to 74 years.

The drugs were used in the following operative conditions:

Arthroplasties	20
Digiti Malleus	
Heloma Molle	
Heloma Durum	
Ganglionic Cysts	3
Hallux Valgus	26
Hallux Rigidus	1
Onychocryptosis	47
Tenotomies	28
Total	125

Discussion and Results

Evaluation of the Drugs

In undertaking this study, it was recognized that the interpretation of results would have to be primarily based on clinical experience and judgment. This because of the lack of any precise laboratory procedure by which the effectiveness of enzyme therapy can be measured. However, the very nature of the foot conditions treated was such that changes could be objectively noted; thus, the results were judged by comparing responses seen to other therapies in similar conditions.

Reported controlled studies confirmed our belief that clinical observations were indeed a valid criterion for evaluating the effect of chymotrypsin. Thus, a double blind study in 62 patients by Edelstein[14] using injectable chymotrypsin in plastic surgery showed that 91% of the chymotrypsin treated cases showed favorable response to surgical ecchymosis and edema as compared to 15% of the placebo group. The treated group recuperated in 5 to 7 days, as compared to 14 days in the control group.

In a controlled animal (monkeys) study by Larsen and Posch[15], chymotrypsin solution was found to be efficacious in the reduction of edema following crushing injuries of the hand. Similar good results were observed in the control of edema following elective operations such as Dupuytren's contractures.

Results of Infiltration Use of Chymotrypsin

As mentioned earlier, the lytic effect of chymotrypsin solution upon the zonules to facilitate extraction of the lens in cataract surgery suggested that the preparation should be evaluated in selected conditions.

In these, the use of chymotrypsin seemed particularly apropos since besides the possible lytic effect there were the established anti-inflammatory properties.

I was very impressed with the excellent results obtained in 449 selected cases which included the following conditions: Heloma Durum, Heloma Molle, Heloma Miliary, Heloma Neurofibromata, Onychocryptosis, Nucleated Tyloma, Trauma and Verruca.

As expected, there was definite reduction in the inflammatory processes which invariably are associated with these lesions. In addition, infiltration of the chymotrypsin aqueous solution produced a thinning out of the area and thus a speedier dissolution

of the pathological tissues. Again, the effect of chymotrypsin in producing relief of pain was noticeable.

Results of Intra-articular and Bursal Use of Chymotrypsin

These results were highly satisfactory in a series of 290 cases of fractures, bursitis, trauma and arthritis of the foot.

In the adjunct use of intra-articular chymotrypsin aqueous in the treatment of fractures and trauma it was found that swelling and hematoma were absorbed faster, ecchymosis was decreased (sometimes miraculously) and pain was reduced or held to a minimum. The over-all impression was that healing time was facilitated.

Following injection there may be an increase in the pain syndrome lasting from a few hours to a day. When the pain abates, frequently one notes an increase in joint motion thus making it possible to use other rehabilitory measures.

We felt that the intra-articular use of chymotrypsin aqueous was as useful as the intra-articular use of corticosteroids while having none of the steroid drawbacks. Also, the intra-articular use of chymotrypsin aqueous is more economical than the use of corticosteroids intra-articularly.

The supplemental use of the oral tablet of chymotrypsin appeared to enhance the effectiveness of the intra-articular injection.

Results of Intramuscular and Oral Use of Chymotrypsin in Surgery

In a series of 125 surgical cases the anti-inflammatory effects observed were highly satisfactory. The amount of postoperative edema was noticeably less than expected. If surgical trauma resulted in hematoma, the speed of resolution was gratifying.

As noted with the intra-articular and infiltration uses of chymotrypsin aqueous, the intramuscular and oral use of chymotrypsin has an appreciable effect on pain. The amount of postoperative pain was lessened. This was substantiated by the reduced requirements for analgesics.

Reactions

Chymotrypsin, like other pancreatic enzymes, is a foreign protein and as such may cause reactions ranging from localized to generalized itching and urticaria to the anaphylactoid type of recation. Indeed, several reports of reactions have already appeared regarding reactions to chymotrypsin, to trypsin, and to streptokinase-streptodornase.

However, in some 2,000 injections of Chymar Aqueous administered by us we have experienced only three reactions. One patient developed a moderate ulceration in a heloma neurofibromata. Two other patients developed urticaria. One of these two patients had an immediate reaction with considerable itching, following the seventh injection. The other patient developed a delayed urticarial reaction following a first injection.

Conclusion

I believe that chymotrypsin has opened new therapeutic approaches to a large variety of foot lesions. Excellent results were obtained when chymotrypsin was used for infiltration, intra-articular and intramuscular injection as well as when used orally. In all, a total of 864 patients were treated. There were only three reactions in over 2,000 administrations of the injectable preparation.

Intra-articularly used, chymotrypsin aqueous suppressed inflammation and pain to a degree comparable to the corticosteroids yet without their drawbacks. As an infiltrative agent, chymotrypsin aqueous produced a dissolution of the pathological tissues and speeded healing to a remarkable degree. The intra-muscular and oral administration of chymotrypsin depressed inflammation, swelling and pain and hastened healing time when used adjunctively in foot surgery.

2131 S. 20th Ave.

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Some Comments on Hallux Valgus Surgery*

Robert L. Brennan, D.S.C., F.A.C.F.S.
Los Angeles, Calif.

MUCH has been written about hallux valgus. Many "cures" have been presented for this common deformity. Of the several dozen procedures devised for correction of this condition, only a few have remained popular. Probably the most widely used techniques are those described by McBride[1], Mayo[2], Keller[3], and Silver[4].

There are other operations such as the impaction wedge osteotomy of the first metatarsal by Billig[5], for correction of marked metatarsus primus varus. The Lapidus[6] procedure is useful in marked hallux valgus associated with severe metatarsus primus varus. In this condition the hallux has become internally rotated so that the nails of the first toes face each other. The abductor muscle has drifted plantarly and now acts as a flexor. Lapidus emphasizes that a restoration of the abductor to its original position must be made. This is accomplished by anchoring the tendon to the first metatarsophalangeal joint capsule on the medial border. By a separate incision he removes the cartilage and a sufficient portion of bone from the first cuneiform-metatarsal joint to swing the metatarsal in line with the second metatarsal. The adjacent surfaces of the first and second metatarsal bases are denuded. Bone chips, freed of cartilage, taken from the operated joint are placed in the Y space between the metatarsals. In 2 to 3 months a bony bridge will usually develop, preventing further deviation of the first metatarsal.

Let us get back to the "routine hallux valgus." McBride recommends the correction of intrinsic muscle imbalance, especially that of the Adductor Hallucis Brevis. He indicates that in hallux valgus the action of the adductor hallucis brevis muscle tends to create internal rotation of the great toe and to cause a buckling outward of the first metatarsophalangeal joint. After excision of the fibular hallux sesamoid the conjoined tendon of the adductor hallucis tendon, together with the lateral branch of the flexor brevis tendon, is detached from the base of the proximal phalanx and transferred to the lateral superior border of the head of the first metatarsal. The tendons are anchored securely to the first metatarsal by 00 silk sutures. This approximates the first metatarsal against the second. A transverse incision is then made through the medial portion of capsule of the first meta-

* Presented at A.C.F.S. meeting in Miami, January 1961.

tarsophalangeal joint and shortened sufficiently to correct the valgus position of the toe. The capsule is carefully freed to expose the exostosis, which is excised flush with the shaft of the metatarsal.

DuVries'[7] modification of the McBride technique gives good to excellent results in most cases. DuVries makes an oblique incision extending from the medial border of the proximal third of the first metatarsal, dorsally, to end at the web of the first and second toes. This serves to give entry to both sides of the first metatarsophalangeal joint. The 1st and 2nd metatarsal heads are spread apart by means of a Weitlander retractor, which gives a much easier approach for transference of the conjoined tendon and removal of the fibular sesamoid. After removal of the retractor, the capsules of the 1st and 2nd metatarsal heads are approximated by several 00 silk sutures. On the medial side of the joint a vertical segment of capsule, about 0.5 cm. is removed, extending from the plantar aspect to include a section of the abductor tendon, to the dorsal surface up to 0.5 cm from the hallucis longus. The capsule over the medial exostosis of the first metatarsal head is gently freed, and the surplus bone is removed flush with the shaft. The capsule is closed with 00 silk sutures. The foot is bandaged by 1½ inch roller gauze. Soft tissue correction holds the hallux in position. The patient ambulates wearing a cut-out oxford the 3rd postoperative day.

The Mayo technique is described as transverse resection of the head of the first metatarsal.

Charles A. Stone[8] has been using a modification of the Mayo technique for the past 50 years with gratifying results. He contends that his modification is simpler, and that the chance of complications or poor results are lessened. Stone recommends an oblique incision extending downward from the dorsal surface proximal to the head, to end at the articular margin of the cartilage on the plantar surface of the metatarsal. The exostosis of the medial border is also removed. Sufficient bone should be removed to leave a space of about 3/16 inch between proximal phalanx and the distal portion of the metatarsal. The technique saves some of the weight-bearing of the head of the first metatarsal. The patient ambulates within a day or two, and according to Stone returns to work within three weeks.

Keller asserts that hallux valgus is best corrected by removing the exostosis from the head of the metatarsal and excising half of the base of the proximal phalanx.

There are two notable modifications of the Keller techniques. There are differences of opinion as to the amount of bone to be removed from the base of the proximal phalanx. One modification involves insertion of a Kirschner wire or Steinman pin through the distal and proximal phalanges into the head of the first metatarsal to act as a splint to prevent subluxation and dorsiflexion of the toes. With the use of the metal pin it is necessary to cast the foot for immobilization. If the base of the proximal phalanx is removed without the pinning, the patient is permitted to ambulate one day postoperatively.

Silver finds that capsular alteration together with the excision of exostosis on the border of the head of the metatarsal produces excellent results.

Of the above mentioned procedures, there have been many alterations and/or modifications.

The McBride operation for hallux valgus seems to be quite satisfactory. Care must be exercised in excising the fibular hallucial sesamoid so that no damage is done to the Flexor Hallucis Longus tendon.

Elderly patients and those suffering from rheumatoid arthritis are the most likely candidates for the Mayo technique. The modification of the Mayo operation used by Stone would be useful in a condition such as hallux rigidus, hallux limitus, hypertrophied metatarsal heads and destruction of the articular cartilage. There will be a shortening of the shaft by absorption when a metatarsal head is removed.

The popularity of the Keller operation lies partly in the ease of performance, plus immediate cosmetic and functional results. Unfortunately, the good results do not last

in many cases. There is in some cases a tendency to ankylosis of the metatarsophalangeal joint. There is always the residual shortened toe. In many patients there will be eventual subluxation of the proximal phalanx on the 1st metatarsal or considerable dorsiflexion of the first toe. The subluxation of the joint will be more apt to occur if metatarsus primus varus is present.

The Silver operation gives excellent results for hallux valgus where the enlargement of bone or exostosis is only on the medial border of the head of the metatarsal and the base of the proximal phalanx is not involved.

In many instances it is necessary to excise the medial border of the base of the proximal phalanx as well as the exostosis on the medial border of the head of the metatarsal. This cannot be accomplished by a transverse incision of the joint capsule because of the narrow margin of capsular attachment to the base of the proximal phalanx.

Most candidates for hallux valgus surgery are females in the 45 to 55 years of age bracket. Post surgically, allowing a reasonable length of time, these women expect to wear fairly stylish shoes. This can be accomplished easily if the surgeon stresses the functional rather than the cosmetic results. Women's shoes, even orthopedic shoes, are not designed for a foot which has a hallux in the normal or slightly varus position.

I have used a modification of the McBride technique in over 300 cases with good functional results. The routine procedures are performed through the incision made between the first and second metatarsals. A second linear incision is made over the medial border of the first metatarsophalangeal joint. The incision is carried down through the capsule to expose the underlying exostosis or enlargement of the head of the metatarsal and the medial border of the base of the proximal phalanx. A sufficient amount of bone should be removed from the metatarsal and phalanx to give a satisfactorily smooth joint. I also utilize DuVries' maneuver of suturing the first and second metatarsal heads together, but only in cases where there is an existing hypermobile first metatarsal. I use his method of roller gauze bandaging and intra-articular injection of 10 mgm of Hydeltrasol®[1] solution.

Postoperative swelling from capillary oozing is effectively reduced by the administration of Hemocoavit®[2] 2 tablets b.i.d. for 3 days prior to surgery and by injecting the contents of a 5 cc. ampule of Hemocoavit deep intramuscularly 12 hours before surgery and 5 cc. daily for 2 days post-surgically.

Fields[10] advises early ambulation to prevent vascular complications, even on first postoperative day, but without weight on forefoot. He also advocates that the foot of the mattress be elevated 2 inches, and that immediate mild leg exercises be substituted.

Summary

1. A number of surgical techniques for reduction of hallux valgus have been briefly described.

2. Selection of the procedure to fit the specific deformity has been emphasized.

3. Control of postoperative edema and the prevention of vascular complication has been outlined.

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®[1] Merck Sharp & Dohme.
®[2] Wynlit Pharmaceuticals, Inc.

Intradermal Injection of Chymotrypsin for Common Foot Lesions

Morton H. Walker, D.S.C.
Stamford, Conn.

MANY researchers[1, 2, 3, 4] have investigated the chemotherapeutic activity of the proteolytic products on tissue inflammation. They have found that intramuscular injections of trypsin and chymotrypsin produce elevated antiproteolytic levels in the blood serum. This indirectly promotes inhibition of polypeptid production, thereby halting the local inflammatory stimulus. Cornbleet[5] says, "The local action of chymotrypsin depends on its enzymatic properties as a protease. It is fibrinolytic and degrades purulent and necrotic tissue. Its antiphlogistic activity is indirect."

Since chymotrypsin therapy acts against acute and chronic inflammations by the build-up of serum antiproteolytic levels, a period of time must elapse for the blood titer to be built up to sufficient level. This author explored the possibility of injecting chymotrypsin directly into the local skin lesion on the foot to speed up the process of repair. This paper notes our successes with this mode of therapy.

Experimentation with mice and rabbits insured a dermal response when chymotrypsin was injected directly into an area of irritation. The smooth pink tails of white mice were abraded and irritated by the application of bichloracetic acid. One mouse tail was compared to another wherein chymotrypsin was utilized intradermally. The mouse tail injected with chymotrypsin invariably healed quicker than the mouse tail not so injected. In one rabbit a naturally occurring hematoma was resolved in a surprisingly short period of time. See Fig. 1, Upper and Lower. We concluded from this animal experimentation and exploration of the literature that intradermal injection into local lesions with chymotrypsin creates a chemotherapeutic effect similar to that a topical antiphlogistic agent creates when rubbed on the skin.

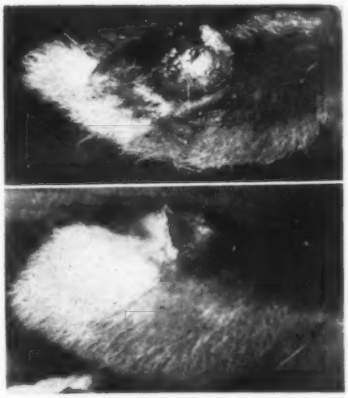

Fig. 1—*Upper:* A naturally occurring hematoma on the hind paw of a live rabbit. It has been present for 1 week and has not increased or decreased in size for 3 days. *Lower:* 72 hours after second injection, the site of the hematoma is completely healed (96 hours after Upper).

Lucas[6] states that Chymar Aqueous®[1] is a stable solution of purified chymotrypsin and is used intramuscularly. Each cc. contains 5000 Armour units of proteolytic activity. The package insert states that it is for intramuscular injection. Precautions (scratch or intradermal testing) should be exercised in those patients with known or suspected allergies or sensitivities. Intradermal testing with Chymar Aqueous is the sensitivity test of choice.

This suggests that local intradermal injection of Chymar Aqueous for common foot lesions is readily determined to be safe and usable. Also, another investigator[7] has utilized Chymar Aqueous into certain local foot lesions with success. Chymar Aqueous by intradermal injection was used in the local healing of intractable sinus, onycho-

®[1]Armour Pharmaceutical Co., Kankakee, Ill.

TABLE I
Summary of Results

Condition	No. of Patients	Average No. of Injections	Average Quantity per Injection	Clinical Results
Ankle sprain	2	1	0.5 cc.	Good—Pain subsided in 24-48 hours. Edema reduced in same length of time.
Heloma durum	3	1	0.25 cc.	Good—Pain subsided in 18-24 hours. Involution of corn in 24-48 hours.
Bursitis of bunions	4	1-2	0.5 cc.	Good — Pain, edema and erythema reduced in 24 hours and completely gone in 48 hours.
Nail difficulty with paronychia	5	1-2	0.125-0.5 cc.	Good — Depending upon severity of symptoms. Pains alleviated in 12-24 hours. Edema reduced in 24-48 hours. Almost complete healing in 72-96 hours.
Intractable sinus	1	2	0.5 cc.	Fair — No dramatic improvement was seen until a cut-out shoe was prescribed.

cryptosis, paronychia, subungual heloma, bursitis of bunions, heloma durum and ankle sprain. Careful clinical study of these conditions, plus the accompanying "before and after" photographs, indicate that the proteolytic enzyme preparation usually caused:

1. Prompt relief of pain 24 to 48 hours after injection.
2. Resolution of erythema, heat, tenderness and tenseness of affected areas often within 48 hours.
3. Reduction of edema surrounding the wound usually within 48 hours.
4. Liquefaction and sloughing of pathological tissues in 48 hours.

The chymotrypsin injection should be preceded by a local anesthetic of a like quantity since injection of the enzyme by itself will cause the patient discomfort.

In this study the grading of patients' improvement and response to the local chymotrypsin therapy was based entirely on clinical observation. The commonest sign of improvement was that the patient had marked reduction of pain and a lessening of erythema, heat and edema. The results are summarized in Table I.

Chymotrypsin injected intradermally for pathological skin lesions of the foot seems to markedly depress the inflammatory processes. In no instance in the 15 cases

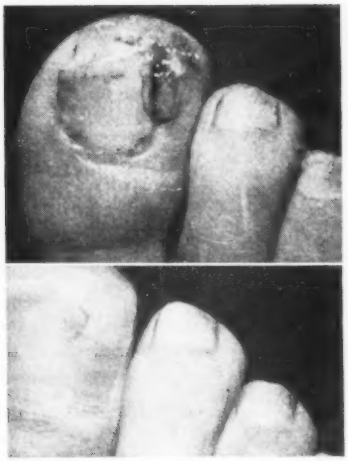

Fig. 2—*Upper:* Paronychia of the nail groove with associated mild suppuration and granulation tissue. This condition has been present for almost 3 weeks with extreme tenderness. Under local anesthesia, the offending portion of toenail was excised along with the proud flesh, hemostatic agent applied, followed by infiltration of ½ cc. of chymotrypsin. Toe was then dry dressed. Injection and dressing repeated at 18 and 42 hours. *Lower:* Toe 48 hours after last injection.

cited did infection spread or relapse occur. The clinical course of certain foot problems seems to progress much faster than usual. The conditions investigated and specifically affected by chymotrypsin were ankle sprain, onychocryptosis, paronychia, subungual heloma, intractable sinus, heloma durum and bursitis of bunions. No sensitivity or allergic reactions were encountered in this study. It is believed that this method of administration is less liable to untoward systemic reaction. If there should be any type of allergic response, this response would be only of a local nature and not severe.

Summary

Intradermal chymotrypsin injection for local minor foot lesions opens a new therapeutic door to the podiatrist. Good results were obtained in 15 patients after animal experimentation and exploration of the literature indicated that chymotrypsin would produce healing properties when applied directly to the lesion itself. In the main, the systemic route was by-passed although some absorption may have taken place.

Acknowledgments

I wish to acknowledge the cooperation of Drs. Norman Gross, Richard Quick and Gerald T. Dolan of the Fairfield County Podiatry Association for making use of the medication and supplying me with their observations. I also wish to thank Dr. J. A. Hubata of the Armour Pharmaceutical Company for the generous supply of Chymar Aqueous used by my colleagues and myself in this study.

1845 Summer St.

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"The art of memory is the art of understanding."
—*Ezra Pound*

A Management Program for Treatment for Onychomycosis in Diabetic Patients

Earl L. Cherniak, D.S.C.*
South Boston, Mass.

FUNGAL infections of cutaneous structures is a chronic foot problem common in diabetic patients. An infection of the nail plate, onychomycosis, presents a source of reinfection to other areas of the body, an area prone to secondary bacterial infection and subject to increased pressure from the hypertrophied infected nail plates. Many methods of treatment are not applicable for use in the diabetic. Chemotherapy using such agents as chrysarobin, acids, thymol and resorcinol, is for the most part too strong for the avascular cutaneous structures. Dyes should be avoided since they hide pathologic color changes significant in diagnosis and treatment. Surgical antifungal agents have been found impractical for the specific treatment of onychomycosis.

Studies are in progress to determine the incidence of fungus infections in the patient with an increased glucose tolerance test. Work done on carbohydrate metabolism of the skin gives evidence that patients with hyperglycemia have an increased glucose content of the cutaneous structures. These individuals are susceptible to T. rubrum and/or bacterial infection of the skin and nails.

McGavack,[1] et al, first experimented with chloranil (tetra chloro p-benzaquinone) and found it to be an effective fungicide of low toxicity capable of application to the human for a wide variety of parasitic cutaneous organisms. The drug was used for the treatment of tinea capitis. Teichmann[5] and Horvath observed the use of other drugs in a lacquer base for onychomycosis and decided to incorporate chloranil in this base. Their results were good. The lacquer provides a base that prevents moisture and contamination by foreign matter, such as food particles and dirt, to the already infected nail plate. Chloranil in a lacquer base is known as Keralac.®1

The method of therapy is as follows. After cleansing the infected nail plates with ether, 70% alcohol and Zephiran Chloride®2 1:1000 solution, the infected nail is reduced with a nail forceps and burrs. The area is again cleansed. The nail bed is examined for ulceration or bacterial infection. The lacquer is never used in the presence of either condition. If the nail bed is clean, Keralac is applied to the remaining nail plate. The patient applies the medication once a week after removing the previous application with nail polish remover. The feet are washed daily in lukewarm water and Dial soap. The patient is instructed not to reduce the nail plate between visits.

The diabetic should be seen every 4 weeks for examination and treatment.

Forty-six patients were placed on this therapy. The results ranged from slight to excellent improvement in the condition of the nail plate. There was no evidence of irritation from the application of Keralac.

Summary

The diabetic patient is prone to onychomycosis. The condition must be treated. An effective, nontoxic preparation, Keralac, is available that may be used in conjunction with routine nail care. It is not caustic or strong as other chemotherapeutic agents and provides an excellent method of control for the diabetic with onychomycosis.

394 W. Broadway

*Podiatric Consultant, Diabetes Service, Boston City Hospital, Thorndike Memorial Laboratory, Harvard University, School of Medicine.

®1 Salem Pharmacal, Naugatuck, Conn.
®2 Winthrop Labs., New York, N. Y.

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Survey of Foot Pathology in an Outpatient Diabetic Clinic

Harold Rubenstein, Pod.D.*
Arthur H. Dube, M.D.*
Syracuse, N. Y.

DURING a 1-year period extending from November 1957 through November 1958, 69 of the 98 patients attending the outpatient diabetic clinic of the State University of New York, Upstate Medical Center, were observed and treated by a podiatrist.

Although many reports on the incidence of gangrene and amputations are available,[1] there is little information on the type and incidence of foot lesions seen in a diabetic outpatient service. The following report summarizes the findings in our group.

Method

Patients attending the diabetic clinic were seen on a regular clinic morning preceding or following their examination by a clinic staff physician or senior medical student. An attempt was made to see all the patients attending the clinic, priority being given to those with known foot pathology. Past and present history with regard to foot complaints was recorded, followed by examination of the feet. The dorsalis pedis and posterior tibial pulses were palpated, skin temperature and gradient, pallor, cyanosis, skin turgor, fat atrophy and hair distribution were noted. In evaluating the neurological status, special attention was paid to the ankle and knee reflexes, vibration sensation, proprioceptive response, deep pain, epicritic and temperature sensations. The feet were also observed for general hygiene, hyperhidrosis or anhidrosis, excrescences, bullae, abrasions, bacterial, yeast or fungal infections, and any nail changes. The feet were examined for evidence of deformity and mechanical malfunction. The footgear and gait were also observed. In addition, the more interesting foot lesions were photographed.

When indicated, patients were referred to one of the general or special clinics for further study and/or consultation. Follow-up foot care was performed either in this diabetic clinic or in the podiatry clinic which convened on a different day.

Findings

The average age of the patients in this survey group was 64. The mean duration of known diabetes was 6.6 years and the number of observations or treatments by the podiatrist averaged 4.8 per patient during this 1-year period. Sixty-three of the 69

*Department of Medicine, State University of New York Upstate Medical Center, Syracuse Dispensary.

patients observed were found to have incipient or long-standing foot problems. The directly observable pathologic findings are listed in Table I.

TABLE I
Foot Lesions Observed in 69 Diabetic Outpatients

Bacterial infections	16
Acute and subacute fungus infections	11
Bullae	4
Corns	28
Calluses	15
Nail lesions (requiring care)	13
Severe mechanical or arthritic deformity	13
Poor hygiene	11
Severe anhidrosis	7
Severe hyperhidrosis	4
Acute bursal involvement	3
Fissures	7
Ulcerations	19

In an effort to determine the possible effect of "diabetic control" on vascular status, vibratory sensation and paresthesiae, each patient's record was reviewed. Previously reported standards[2] for estimating the degree of control were used. The results are summarized in Table II.

Vascular and neurologic status did not appear related to the degree of control except that vibratory sensation was usually absent in those poorly regulated.

A high incidence of vascular changes was noted. Twenty-five of 69 patients or 36% had complete absence of the dorsalis pedis and posterior tibial pulses. Twenty-seven or 39% had a good vascular status and the remaining 25% had some degree of circulatory embarrassment, such as the absence of one or more, but not all, of the pedal pulses.

Complete absence of vibratory sensation was observed in 24 or 35%, while a normal vibratory sensation was seen in only 21 or 30%. The remaining 35% showed some diminution of vibratory sensation.

Three Representative Cases

The following are illustrative cases, representing the most common problems seen.

Case 1. Female, age 40, past history of osteomyelitis resulting in amputation of the third metatarsal head and toe, left foot. When first seen, infected, deep-seated ulcerations were present plantar to the heads of the second and fourth metatarsals. The head of the fourth metatarsal was very prominent and subject to trauma. A previously applied metatarsal bar proved of little value. Local therapy consisted of weekly debridement of necrotic tissue plus daily pHisohex foot soaks followed by application of a 1% aqueous gentian violet solution, and dry sterile dressings. In addition, a special weight-dispersion insole was fabricated (Fig. 1, left) and a flat heel, broad blucher last oxford was prescribed. Figure 1, right, shows the foot following many months of treatment. Rehabilitated, it allows normal ambulatory activities without signs of further breakdown.

TABLE II
Relationship of Diabetic Control* to Vascular and Neurologic Status of the Feet

	Diabetic Control				
	Excellent	Good	Fair	Poor	Total
Vascular status good	7	9	6	5	27
Vascular status poor	6	7	5	7	25
Vibratory sensation: foot and ankle absent	8	5	4	7	24
Vibratory sensation: foot and ankle present and normal	4	8	8	1	21
Paresthesias	1	1	3	1	6
No. of Pts. in each control group	17	21	18	11	

*Diabetic Control

Control	Fasting Blood Sugar	Urinalysis
Excellent	140 mg/100 cc. or less	0 to 1+
Good	140 to 170 mg./100 cc.	0 to 2+
Fair	170 to 220 mg./100 cc.	0 to 3+
Poor	220 mg./100 cc. +	

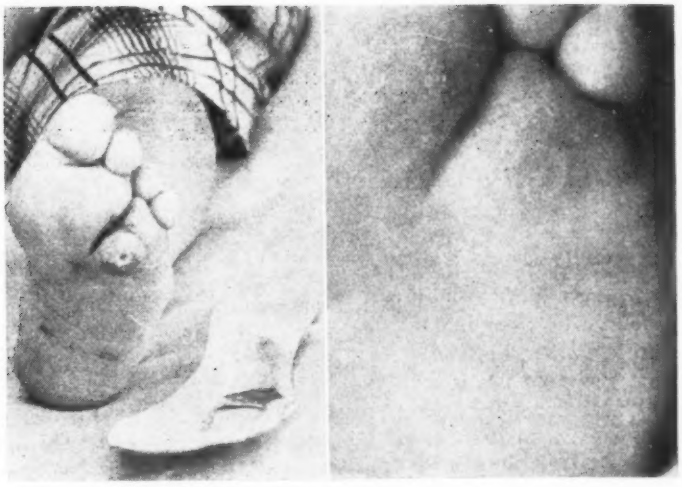

Fig. 1
Case 1. Left—Before, and Right—After, Several Months of Treatment.

Case 2. An 80-year-old white female, with poor peripheral circulation and absent pedal vibratory sensation, had corns dorsal to the proximal interphalangeal articulations of the second and fourth toes, left foot, with underlying bursal involvement, all revealed in routine podiatry survey. Debridement uncovered a punched out pressure necrosis ulceration on the second toe. Mechanical debridement, medicinal therapy and protective removable shields, resulted in healing of the ulcer with no further breakdown.

Case 3. A 61-year-old white married male who, when first seen, was not known to have diabetes mellitus. A draining ulceration on the lateral surface of the left fourth toe had been treated previously with penicillin and foot soaks with little response. Referred to the podiatry clinic, exudate was cultured on bacterial and fungal media and X-rays were ordered. Culture revealed monilia yeast cells. X-ray showed underlying osseous erosion. Urinalysis was negative. Fasting blood sugar was 110 mg./100 cc. Because of the slow healing wound and the presence of a monilia infection, a glucose tolerance test was ordered. The tolerance test demonstrated delayed return of the blood sugar to normal, characteristic of diabetes mellitus. Whereas the wound had failed to show signs of healing for 2 months, treatment with a low carbohydrate diet, Mycostatin®[1] orally, gentian violet 1% aqueous topically and a protective removable shield resulted in rapid closure of the sinus tract and eventual subsidence of deep sensitivity.

Discussion

A survey of 69 patients in an outpatient diabetic clinic revealed significant foot lesions previously unreported and/or unrecognized. Early observation and treatment of infections, pressure necrosis ulcerations, and other insidious foot problems resulted in uneventful and complete recovery in most cases. Many of the individuals in this survey group were long-standing diabetics, difficult to control, with advanced circulatory embarrassment and neurologic involvement. Despite these factors, only one in 69 developed serious foot involvement. This case concerned a 46-year-old white widowed female with known diabetes of 10 years duration. Diabetes was complicated by severe obesity, weight being in the vicinity of 260 pounds and a fasting blood sugar in the 250-300 mg./100 cc. range. Early neuropathy and circulatory embarrassment were evident;

[1] Squibb

there was also a history of recurrent ulcerations on the weight bearing areas of the right foot. The patient did not heed advice on her systemic diabetic status nor on her foot problems. Consequently, this lack of patient cooperation resulted in her return to the clinic with a deep fascial infection requiring hospitalization and surgical intervention.

Many of the patients examined had knowledge of the complications that involve the feet of diabetics, but most did not know the basic rules of proper foot care. Hot water bottles, heating pads, strong irritating medications such as commercial corn removers and iodine, razor blades, knives and scissors for the removal of skin excrescences, were initially in general use. Several individuals who had fear of foot involvement, were using "alcohol" applications to keep the skin clean, resulting in anhidrosis, fissures and infection. Improper footgear was commonly noted. Routine, careful scrutinization of all diabetic feet, not only at hospital clinics, but also in private offices, will yield a high number of unsuspected foot lesions. Careful medical and podiatric care will reverse the pathologic process in most instances. Close contact between the supervising physician and podiatrist is of great aid.

Summary

This survey has revealed a 91.3% incidence of incipient or long-standing foot lesions in these diabetic patients. Either because of neuropathic changes with diminished sensation or a general disregard of foot hygiene, many infections, pressure necrosis ulcerations, inflammations, etc., apparently were not observed by the patient and brought to the attention of the doctor until the conditions were well advanced. No good correlation between the severity of vascular and neurologic impairment in the feet and diabetic control could be drawn. Those with poor control, however, were much more likely to have absent vibration sense.

The importance of professional foot care in the diabetic has been stressed, as has been the need for close liaison between the physician and the podiatrist.

709 E. Genesee St.

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Erratum:

The following was inadvertently omitted from "Painful Heel in a Professional Boxer," J.A.P.A., pg. 425, June, 1961:

"The author wishes to acknowledge that the use of the therapeutic and sympathetic ankle nerve block comes as a suggestion from Dr. Marvin Steinberg."

Clinically Speaking

A place for the more informal presentation of reminders, suggestions, notes, observations and technics of value in office practice. Your contributions of short manuscripts or illustrative case histories will determine this section's usefulness.

Adenylic Acid Therapy for Mechanical Foot Problems by Varicose Veins

Ralph E. Owens, D.S.C., F.A.C.F.S.
Oklahoma City, Okla.

PERIPHERAL vascular disease, as varicose veins and chronic thrombophlebitis, frequently complicate cases of mechanical foot problems that present themselves in my office. Each case is carefully examined by palpating the deep calf veins (Meyers test), and the plantar structures are examined for plantar fasciitis, tendinitis, bursitis, and myositis at the attachment to the calcaneus. (Pain in the area of the calcaneus is often mistaken for pain associated with inferior calcaneal exostosis. Chronic strain of the plantar fascia causes subjective pain and tenderness on palpation of the plantar fascia. An exostosis may subsequently develop from the chronic strain. The actual diagnosis is inferior calcaneal fibrositis due to chronic foot imbalance.)

Pain elicited by palpation of the deep calf vein usually indicates venous stasis of the lower extremity. Venous stasis impairs normal arterial-venous exchange. This results in a stagnant hypoxemia. Tissue resistance is lowered, giving rise to various inflammatory processes wth edema and foot congestion unilaterally, and occasionally bilaterally.

Treatment of varicose veins varies with the degree of venous insufficiency. In uncomplicated varicose veins, where there is little distension, and they do not descend much below the level of the knee, elastic stockings may suffice. With extension of the varicose disease, treatment becomes much more complicated. Other degenerative disease conditions frequently are manifest with the varicose pathology. Management is primarily supportive and mechanical. This consists of pressure bandages, the Unna paste boot, balanced inlays to relieve plantar fascial strain, venous exercises such as elevation of the feet and legs, and contrast baths. In more severe cases, oral and parenteral vasodilators may be indicated.

I have found that My-B-Den®[1] (adenylic acid therapy) in the above conditions will relieve edema, inflammation, and pain resulting from thrombophlebitis and tendinitis and even so-called "spur heel" pain. The usual patient response is: first, relief of pain; second, the return of function; third, subsidence of swelling; and fourth, disappearance of local tenderness.

My-B-Den is adenosine-5-monophosphate (A_5MP) in the form of its sodium salt. A_5MP is involved in cellular nutrition and energy transfer, basic to the function of living cells. The exact mechanism of the therapeutic benefits derived is not fully understood. It is felt that imbalances or deficiencies at the cellular level are corrected with its administration. Some of the therapeutic effect is due to the drug's vasodilating action and its ability to reduce tissue edema and inflammation.

I have found My-B-Den useful in podiatry practice in treating congested feet due to varicose vein complications, edema, stasis dermatitis, pruritis and most of the other inflammations of the feet, especially those resulting from venous stasis. For me, it is a "must" on preoperative care of bunions and digital surgery if there is pain in the deep calf muscles. It hastens healing, and prevents edema, pruritis and dermatitis.

100 mg. Sustained-Action My-B-Den intra-

®[1] Ames Co., Inc.

muscularly every other day until a minimum of 10 injections have been given is suggested. Less severe cases may be given 1 cc. of the 20 mg./cc. daily for 3 days and then on alternate days to total 10 injections. Sublingual tablets are also available for use when the patient is unable to meet the dosage schedule, but should not be used as a primary source of the medication. A 1½ inch 20 to 24 gauge needle is recommended for injecting into the upper and outer quadrant of the buttocks (gluteus maximus). The gelatine solution of the Sustained-Action My-B-Den must be warmed in warm water until completely fluid before use.

After reduction of edema, inflammation and pruritis, therapy may be continued with 1cc. of 20 mg./cc., reduced as symptoms and signs improve, to one or two injections per week.

Medical contraindications to My-B-Den have not been reported. However, it should be mentioned that slight flushing, dizziness or palpitation may occur momentarily following injection. This is probably due to the vasodilating effects of the drug when absorbed rapidly, but rarely occurs with Sustained-Action form.

Summary

Varicose veins and chronic thrombophlebitis are seen frequently in podiatry practice. These conditions usually are not the primary condition or chief complaint of the patient, but successful therapy of a mechanical foot problem many times depends on their recognition and treatment. Certainly, cure is not always attainable, but relief of symptoms and return of the limbs to useful function can be achieved. Varicose veins complicated by chronic thrombophlebitis are major indications for the use of My-B-Den.

1700 Exchange Blvd.

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An Unusually Large Mosaic Verruca

Louis Penensick, Pod.D.
Olean, N. Y.

THIS case is being submitted not because there is anything unusual about a mosaic verruca, but rather because of its unusual size. In this particular case, the illustration would be enough (Fig. 1.), but this case

Fig. 1
Giant Sized Mosaic Verruca

also has somewhat of an unusual background that might be of interest. Royal Montgomery, the well-known dermatologist, thinks that it is the worst case he has ever seen.

The patient, who first came in 2½ years ago, is a white female, 23 years of age. One outstanding fact immediately observed, aside from the skin lesion, was her very poor circulation. Her legs were covered with the scars of healed ulcers. The skin lesion covered the balls of both feet. The diagnosis of mosaic verruca was confirmed by biopsy.

Treatment consisted at first of the alternate use of a formaldehyde solution and salicylic acid ointment, along with Vitamin A orally. Results were rather slow, but after 3 months the patient was able to wear her dress shoes occasionally.

About this time, the young lady required some minor surgery and her physician convinced her that he could cure the verruca much faster than we could. For the following 2 years the patient was shunted from one dermatologist to another with no results. The sole culmination was a nervous breakdown, and the patient spent 3 months in a mental institution.

Upon her discharge, the patient returned to our office once again. The lesion had spread to several toes on both feet, the heels and hands. At this point, we referred her to Dr. Montgomery who, in turn, had her return to our office with the recommendation that we use treatment similar to that used originally. The patient has now been treated for about 2 months and some progress is noticeable. But what is more important, perhaps, is that the patient's mental attitude has improved considerably.

116 North 2nd Street

Ewing's Sarcoma—
A Case Report

Arnold W. Newman, D.S.C.
Philadelphia, Pa.

An 11-year-old girl was presented for examination in February, 1957, for an acute swelling due to injury. Questioning the mother elicited the information that "Harriet got her foot wedged between the bed and the wall while jumping on the bed last night." There were about 2 days of pain and limping, after which the pain disappeared and the incident forgotten. The evening before the patient was brought in, she complained of swelling on the dorsum of the left foot which prompted the request for examination.

Clinical examination revealed a sharply defined "roundish" area of swelling, extending from the first metatarsal to the fourth, laterally, and posteriorly from the heads to the bases of these metatarsal bones. This swelling was almost symmetrical on both dorsal and plantar surfaces of the foot. The right foot was examined and found to be normal in appearance.

Palpation revealed the mass to be soft and painless. Plantar flexion of the fourth toe elicited mild pain.

The left foot was X-rayed in the dorsoplantar, lateral and oblique positions with the right foot for comparison. The roentgenograms revealed a loss of trabeculation along the shaft of the fourth metatarsal bone and a peculiar "pock marked" appearance. The patient was referred to an orthopedist for consultation. The patient was hospitalized, another series of X-rays were taken and a guarded diagnosis of tumor was made. After another consultation with a second orthopedist the diagnosis of tumor was confirmed and it was decided to operate.

On March 13, 1957, the patient was operated upon with this reporter assisting. After incision and retraction of the soft tissues, the lesion was observed as a dirty-looking grayish non-encapsulated mass encircling the fourth metatarsal bone like a doughnut with a tail-like projection extending posteriorly and laterally to the lateral cuneiform. This was dissected free. The fourth metatarsal bone had a "moth eaten" appearance, was disarticulated and removed, leaving the fourth toe intact. The metatarsal bone and tumor mass were prepared for analysis. The pathologist reported the analysis as Ewing's sarcoma. After 48 hours the patient had complete skeletal X-rays which were negative. In 14 days she was discharged from the hospital and was then given a series of 12 weekly X-ray therapy treatments with about a month intervening between the series.

The patient has been under constant observation by this reporter since her surgery. She has had skeletal X-ray examinations and complete blood studies every

6 months. She has followed a normal routine and has developed normally, physically. With the exception of the fourth toe, her left foot has developed normally.

On May 4, 1961, she was brought into the office with a history of acute pain on the lateral surface of the calcaneus of the left foot. There was no history of trauma. Palpation of the area was exquisitely painful. There was thickening of the soft tissue extending from the insertion of the Achillis tendon distally to the anterior border of the calcaneus. Also observed was a thickening of the soft tissue at the medio-planter aspect of the bone and along the course of the shaft of the first metatarsal bone. In view of the previous history, she was immediately referred to the roentgenologist who had taken her previous X-rays. The report follows:

> "The left calcaneus has practically lost its trabecular pattern and is replaced by a spotty sclerosis. Overlying this dense appearance are small, irregular unequal cysts. Most of the calcaneus is involved. The posterior epiphysis is spared. The other bones, joints and epiphyses of the feet and ankles remain unchanged from previous examinations.
>
> CONCLUSIONS
>
> There is a dense sclerotic infiltration of the left calcaneus. The nature of the lesion is not clear from the film. However, in view of an earlier diagnosis of Ewing's, metastasis must be the first consideration."

The patient was admitted into Wolffe Hospital on May 6 and her chest X-rayed. This was negative for pathology. On May 8 she was operated on. The lateral surface of the left calcaneus was exposed and samples of cancellous bone were removed for analysis. In contradistinction to the report of the roentgenologist of sclerosis, the samples of bone removed were very soft and gave little resistance to the gouge. Although a cuff had been applied to the thigh for a bloodless field at a pressure of 160, there was profuse bleeding which had to be controlled with the insertion of Gelfoam,® [1] an indication in itself of morbid pathology. The wound was closed with chromic and skin sutures and a knee-length cast applied. Recovery from surgery was uneventful.

On May 18, 1961, the pathologist reported "metastasis of Ewing's tumor to the calcaneus." After a conference with the surgeon and the parents, it was decided not to amputate. In view of the fact that metastasis had already occurred remote from the primary lesion, it was probably elsewhere in the skeletal system.

The patient will now have complete skeletal X-rays and will receive X-ray therapy wherever secondary lesions are discovered. She will have complete skeletal X-ray diagnosis at frequent intervals and therapy where necessary.

Prognosis is poor, with a life expectancy of from 1 to 5 years.

Summary

A case of Ewing's sarcoma has been reported with metastasis of the primary lesion after almost 4 years of apparent freedom from secondary involvement.

5411 Chester Avenue

® [1] Upjohn

Pedestrians crossing the street didn't make it on more than 170,000 occasions during 1960. We wonder if those with foot trouble might have made it if their feet had been in good condition.

JOURNAL
OF THE
AMERICAN PODIATRY
ASSOCIATION

The Official Publication of the Podiatry-Chiropody Profession

PUBLISHED UNDER THE DIRECTION OF THE BOARD OF TRUSTEES BY THE AMERICAN PODIATRY ASSOCIATION
3301 Sixteenth Street, N.W., Washington 10, D. C.
A. RUBIN, D.S.C., Editor

Communications regarding manuscripts, news items, and editorial matters should be addressed to the Editor, those regarding advertising to the National Advertising Representative.

President's Message

Podiatry-Chiropody Education Is a Priority—Let's Safeguard and Secure It by Investing in Its Future Now!

Over the years we, in our profession, have earned the respect and trust of our fellow man, including many in our allied professions. Such trust carries with it the burden of responsibilities. One of the gravest of these, outside of his daily professional duties, is the podiatrist's obligation to his profession.

Perhaps, because of increased demands of modern practice, many of our colleagues have become so engrossed to the point of excluding other vital interests that they become intellectually separated or cut off from society. More consequential is the almost unavoidable result in a growing misunderstanding and distrust on the part of the general public and loss to society. It is important, therefore, that this incline be transposed.

In the light of existing conditions within our educational institutions, our podiatrists have a common understanding and interest in their unique status to serve as ambassadors of good will and a powerful influence upon the progress of podiatry-chiropody education.

Born out of the challenging needs and competition with other healing arts and vocations, the "Fund for the Advancement of Podiatry-Chiropody Education" was founded 3 years ago. An appeal initiated the solicitation of funds from our practicing colleagues to support the upgrading of our educational institutions either through direct contributions to these colleges or by donations to the Fund.

The Fund offers our colleagues little in the way of financial remuneration. Instead, they receive the satisfaction of knowing they have contributed immeasurably for the

good and welfare of our growing profession. The Fund is a project involving national cooperation across the country on a "colleague to colleague" basis, more or less.

Current competition in most fields of professional endeavor is a powerful force and challenge to podiatry. Concerted efforts to upgrade our educational institutions through modern facilities and teaching techniques, and expanding knowledge and skills, has a broadened impact effective in student enlistment. But even more meaningful is the ability to diagnose, treat and meet the needs and demands of the nation's foot health.

Your cooperation and generosity will long be remembered in fulfilling vital needs—helping our colleges to help themselves—leading to better understanding and increased respect throughout our profession and the general public. It will inevitably punctuate the fact that we as colleagues, acting on our own, are seriously concerned about the welfare of our colleges and are earnestly initiating POSITIVE ACTION to meet our objectives.

We believe these "colleague to colleague" contacts will continue progressively to strengthen, safeguard and maintain increasing skills and knowledge to a point where growth in student enlistment will REACH and BREAK an all-time record. For colleagues, like ourselves, this indeed is payment enough.

ROBERT SHOR, D.S.C.

Are Two Years of Pre-Podiatry Necessary?

The most significant feature of our recent annual meeting was the receiving of the report of the Special Commission on the Status of Podiatry Education. Few of us have yet "digested" all of its recommendations. One of its recommendations is that we should work toward requiring a minimum of 60 semester hours credit towards a baccalaureate degree, as a pre-podiatry prerequisite for admission to a college of podiatry. The Commission does not suggest how soon this should be accomplished.

This question has been under consideration by the Council on Education of the American Podiatry Association which has been recommending this 2-year pre-podiatry minimum for some years. The Council's report to, and acceptance by, our 1961 House of Delegates, sets the fall of 1964 as the time when all schools shall require this. Two of our colleges have had this requirement for a number of years.

Some of our colleagues wonder if this is not asking too much of the student desiring to enter our schools. They point out that some medical schools are admitting some students with only 2 years pre-medicine. A "Letter to the Editor," published elsewhere in this issue (page 749), presents this viewpoint. The point is made that medicine is doing this because shortening the length of time of training will increase the number of applicants

for entrance into medical schools. So they ask, "Why is it necessary for us to increase our pre-requirements?"

Before attempting an answer, it is necessary to recognize several things. First of all, the special 2-year pre-medical prerequisite is being offered to only a few selected, really top-notch students. And these students must make up their deficiencies in the humanities and social sciences while pursuing their medical studies.

Secondly, this question assumes that the major reason for the drop in enrollment in podiatry colleges (and in all the health sciences) is due to the length of the course of study. A recent paper on "Recruitment of Dental Students"[1] suggests at least four other reasons. Paraphrased for podiatry, these are:

1. The fairly recent increased emphasis on the physical sciences.

2. Financial investment necessary in preparing for podiatry.

3. Inadequate communication between podiatry and those influential in vocational guidance.

4. Indifference of the practicing podiatrist.

Also, at least one of our schools has been increasing its enrollment since requiring 2 years pre-podiatry. It may be also significant that the podiatrists[2] with pre-podiatry training average 2.4 years of such training.

Now to our question.

Most of us are aware of the great concern in the nation for all facets of education. Many educators contend that today it takes 2 years of college to bring the individual up to the level of what used to be considered a good high school education. Advances in medical sciences require a greater understanding and, if our colleges are to impart to our students the necessary knowledges and skills, the student must bring with him the necessary educational experiences which are almost impossible to acquire in less than 2 years of college work.

But perhaps as important, if not more important, is the fact that the individual, after graduation, embarks on a career requiring him to accept the role of a professional person. He must be able to communicate with his patient, his community, his profession and other professions and groups. He must be prepared to participate in, and perhaps, accept a leadership role in community affairs. And who else but he can contribute to and provide leadership in his own chosen profession!

Nothing less than 2 years of pre-podiatry can provide him basic information in the physical and biological sciences so that he can acquire in our colleges the necessary skills, knowledges and judgment. Nothing less than 2 years of pre-podiatry can provide him the basic knowledge from the humanities and the social sciences, nurtured and utilized while in podiatry college, that will enable him to accept his role in society as a professional person.

1. Randolph, Kenneth V.: *Recruitment of Dental Students—The Problems and Some Solutions*, Journal of Dental Education, Vol. 25, No. 3, p. 203, Sept. 1961.
2. Egerter, B. C.: *A Report of the Statistical Survey*, J.A.P.A., Vol. 50, No. 10, pp. 824-828, Oct. 1960.

Pharmaceutical Preparations for the Profession

Harry L. Hoffman, Ph.G., D.S.C.
Chairman, Council on Podiatry, Therapeutics and Pharmacy

A column devoted to preparations, new and old, with emphasis on their value and uses in everyday podiatry practice. This is a regular monthly column prepared from information furnished by the pharmaceutical house. We invite questions, which we shall endeavor to answer, or obtain the answer.

The following item is reprinted from the August issue of the Journal of the American Podiatry Association, *pg. 585, due to misspelling of product name, "Surgicel Absorbable Hemostat."*

Surgicel Absorbable Hemostat

Description: Alpha-cellulose in the form of the purest cotton linters is the basic material. This alpha-cellulose is converted, in an alkaline organic solvent, to a viscose which is then forced through spinerettes into a coagulating bath, where the material is regenerated in the form of pure uniform filaments, and, at the same time, undesirable by-products are separated and removed. The filaments of the pure regenerated cellulose are then spun into threads and knitted into gauze. The regenerated cellulose now possesses an important feature *not* found in natural cotton fibre: *a marked uniformity of chemical, molecular and physical structure.*

This oxidation step modifies the basic cellulose molecule by converting a primary alcohol radical to a carboxyl group. The resultant final structure is the molecular unit of oxidized regenerated cellulose. It is therefore the combination of regeneration and oxidation of chemically pure cellulose which gives the product its unique properties and differentiates it from other available hemostatic agents.

Advantages: (1) It does not depend on normal clotting mechanism of the body. Hemostasis begins immediately and is complete in 2 or 3 minutes. (2) This is a versatile product and can be used in any type of surgery. (3) After serving its purpose, it is completely absorbed in the blood stream. No tissue reaction has been reported or observed.

Clinical Advantages: Chemical and biological uniformity assures dependable performance. This dependable hemostat does not fragment and may easily be sutured in place if necessary. It conforms readily to irregular contours. It readily adheres to oozing-weeping surfaces but not to gloves or instruments. It is promptly absorbed with minimum tissue reaction. It is effective on epithelializing surfaces and surface wounds. According to our available data, there is no instance of intolerance or sensitivity in hundreds of cases.

Uses in Our Field: Orthopedic surgery, treatment of traumatic wounds and many types of major surgery.

Supply: In many sizes, but 2″ x 3″ in 3 glass vials to a carton. The aforementioned size most suitable for small weeping areas, minor surgery and for office use. By Johnson and Johnson, New Brunswick, N. J.

Desitin HC Ointment with Hydrocortisone 1%

Description: Desitin HC Ointment with Hydrocortisone provides 1% hydrocortisone (as the alcohol) added to the well known Desitin Ointment formula of high grade Norwegian cod liver oil (with its unsaturated fatty acids and Vitamins A and D) zinc oxide, talcum, petrolatum and lanolin.

Action and Uses: Anti-inflammatory, antipruritic, anti-allergic, indicated to relieve inflammation, itching and edema, protect and lubricate the skin, and to aid in healing. Eczematoid dermatitis, also useful as an application in contact dermatitis (poison ivy, oak, chemical irritants), stasis dermatitis, external ulcers.

Application: Apply a small quantity on the affected skin 2 to 4 times daily, using gauze dressings when necessary.

Precautions: As with other topical anti-inflammatory steroids, do not apply to tuberculosis of the skin. If infection is present or develops do not use ointment until infection is controlled by adequate antibacterial therapy. This is a prescription item only.

Supply: In tubes of ½ and 1 oz. By Desitin Chemical Company, 812 Branch Ave., Providence 4, R. I.

Tashan Cream

Antipruritic; Protective

Description: Each Gram contains d-Panthenol 50 mgm., Vitamin A 10,000 U.S.P. units, Vitamin D 1,000 U.S.P. units and Vitamin E 5 mg. All this in a vanishing cream base.

Action and Uses: For relief of irritation, pain, itching in a variety of skin disorders such as sunburn, prickly heat, poison ivy, minor burns, dry skin and fissures and insect bites.

Administration: Topically. Apply a thin layer to affected area.

Supply: In 1 oz. tubes and pound jars. By Roche Laboratories, Kingsland Road, Nutley 10, N. J.

Correction:

The following Scientific Exhibit Award was inadvertently omitted from the Preliminary Report, 1961 Annual Meeting, published on page 666 of the September issue of the Journal:

"1. Individual—Class B (unsupported): Gold—Marvin W. Shapiro, D.S.C., Toledo, Ohio, for his exhibit, 'Diagnosis and Office Management of a Few Common Foot Problems.'"

Digests From The Literature

Anyone wishing to read the complete article, if not available in your local library, may borrow it through interlibrary loan. A microfilm may be borrowed from the National Medical Library, Washington 25, D. C., or a photo-duplication may be obtained from that library.

Dermatology

Treatment of Dermatomycoses with Griseofulvin: A Second Report Based on 155 Cases, V. Pardo-Castello. Arch. Derm. 81: 772-75, 1960.

Local treatment with griseofulvin, this author states, is the therapy of choice in cases of tinea capitis, onychomycoses, tinea cruris, and tinea pedis, but treatment must be continued for a considerable time to prevent relapses and reinfections. Treatment of 155 cases of superficial mycoses in 115 patients with griseofulvin produced excellent results.

Recurrent Lymphangitis of the Leg Associated with Dermatophytosis: Report of 25 Consecutive Cases, Young, J. R., and deWolfe, V. G., Cleveland Clin. Quart. 27: 19-24, 1960.

Lymphangitis leads to thrombosis and occlusion of lymph vessels. Inflammation causes excessive accumulation of proteins in the interstitial fluid which, stored up, impedes lymph flow and further storage of proteins. The result is growth of fibroblasts and production of scarring of subcutaneous tissue. This can be prevented by early diagnosis and treatment. Any small break in the skin may provide a portal of entry for bacteria in cases of lymphangitis. Dermatophytosis with moist, warm, macerated skin and fissures between the toes provides an ideal portal of entry for bacteria causing repeated attacks. In some cases streptococci have been isolated from fissures.

Recurrent lymphangitis in 25 patients was treated over a 10-year period. These patients all had proven dermatophytosis. Onset is sudden in these cases, severe symptoms develop within a few hours, pain becoming acute, attended by shaking chills and fever up to 106°F, lasting for a few hours to 3 days and often accompanied by malaise, headache, nausea and vomiting. A small red area on the leg soon spreads over the extremity which is swollen and tender. The attack may last from 4 to 14 days, but the swelling persists until clinical signs of acute inflammation disappear. Attacks may recur once a week or several months apart. The 25 patients had 2 to 32 attacks in 1 to 30 years. One patient had 30 attacks within 3 years. With each attack, edema becomes worse until eventually it becomes irreversible. Of 20 patients followed up, 15 reported no further attacks, 5 continued to have attacks. All still had dermatophytosis. The disease is frequently misdiagnosed. Sixteen patients who had been previously examined elsewhere had received a diagnosis of thrombophlebitis or recurrent thrombophlebitis; 3 had a diagnosis of cellulitis; 2 rheumatic fever, and 1 osteomyelitis.

Acute lymphangitis attacks often subside spontaneously in 4 to 14 days. Dramatic response within 1 to 3 days may follow treatment with penicillin or other antibiotics. Bed rest, elevation of the affected extremity, and application of warm, moist packs are helpful. Edema of the limb should be controlled as far as possible. A well-fitted elastic stocking is helpful if worn whenever the patient is up and about. A course of diuretics may be necessary. Resistant edema is treated by pneumatic massage and precise fitting with a pre-stressed elastic sheath as needed. All sources of infection must be eradicated. An ointment of undecylenic acid is applied twice a day until the infection is cleared and then once a week; a powder containing the same agents is dusted into shoes and stockings three times a week. Drying between the toes after bathing, and wearing of clean stockings daily should be advised for an indefinite period. Resistant cases, especially

in patients with onychomycosis, should be treated with the antifungal griseofulvin.

Treatment of Some Dermatoses by Local Injection of Vitamin A: Histologic Effect on Human Epidermis; Effective Treatment of Warts, Klauder, J. V. Arch. Derm. 81: 253-59, 1960.

A synthetic vitamin A palmitate solution (Keramin), containing 50,000 U.S.P. units per cc., when injected into normal skin, produced hypertrophy of the epidermal cellular layers by reducing the thickness of the corneum. The vitamin was injected in treatment of various cutaneous lesions, the amount varying with the size of the lesion, ranging from 0.1 to 0.4 cc. injected at one site, to a total of 1.0 cc. in three to four injections at different sites. The patients received injections once or twice weekly, or every 5 days. A local reaction of short duration occurred in 4 of the 31 patients with plantar warts, a redness and swelling with or without bleb formation. Subsequent injections given these four patients brought no reaction, indicating it was a non-allergic reaction. No systemic adverse reactions occurred in any patient. A dark puncta, of hemorrhagic origin, preceded disappearance of the wart—a distinctive reaction of plantar warts observed after oral administration of vitamin A. The same treatment applied to finger warts produced little effect. Possibly different viruses may be involved in finger and plantar warts.

The plantar warts of 30 patients out of 31 treated disappeared after two injections in small warts and 4 to 5 in larger or multiple warts. One young woman required 13 injections over a 5-month period in treatment of solitary and confluent clusters of warts on the heel and sole. Introduction of a control solution into plantar warts had no effect. Senile keratoses (7 cases), erythematoid benign epitheliomas (6 cases), and calluses (2 cases) responded to treatment, but recurred. No effect was produced on sebaceous warts (4 patients with 1 or 2 lesions), psoriasis (1 patient), thickened lichenified eczema (1 patient), and leukoplakia (1 patient). Keloids in 4 patients and scars in 2 patients, although they softened and became lower, and therefore less sensitive to traction and less tender, were not otherwise benefited.

Diabetes

Protecting the Diabetic Foot — Triple Threat, Lowrie, W. A. American Acad. Gen. Pract., 11th Ann. Sci. Conf., San Francisco, April 6, 1959, pp. 91-92.

The triple threat to the diabetic is arteriosclerosis with its attending poor circulation, neuropathy producing poor sensation, and a proneness to infection. Diabetic symptoms usually occur first in the foot. Serious consequences can follow minor injuries to the foot—those caused by sharp objects used in trimming calluses, pin pricks, tacks penetrating slippers, and shoe nails. Tearing the skin on removal of adhesive tape or while pulling off dead skin is another minor but dangerous injury. A third type is that of pressure injuries resulting from new shoes which produce blisters, ill fitting shoes, torn shoe linings, holes in the stockings, foreign bodies in the shoe, and bruises received when barefooted, which can lead to hematoma and necrosis. Thermal injuries can be caused by various objects such as hot water bottles, heating pads or spilling of liquids on the foot (grease, tea, soup), or hot baths; also, such agents as tincture of iodine, corn plasters, salicylic acid and oil ointments.

All diabetic patients should be instructed in hygiene and proper care of the foot. They should be continually reminded of this need, and especially when neuritis or impaired circulation becomes evident, and repeated cautions should be given against incurring minor injuries.

Drugs

Physiochemical Basis of the Buffered Acetylsalicylic Acid Controversy, Levy, G., and Hayes, B. A. New England J. Med. 262: 1053-58, 1960.

Gastrointestinal irritation following the usual therapeutic doses of acetylsalicylic

acid used to relieve minor pain is produced by the solid acetylsalicylic acid particles in contact with the gastric mucosa. The larger doses, as used in treatment of rheumatic fever and arthritis, can cause both central and local side effects. The incidence of gastric side effects and the rate of absorption are controlled by a chemical factor: the rate of solution. The different brands of plain tablets being distributed show significant differences in their dissolution rate. These differences may account for some of the conflicting clinical reports regarding relative advantages of plain and buffered tablets.

Any positive advantage a buffered product may have must be a reduction of local irritation rather than the central effect of acetylsalicylic acid. The small amount of antiacid contained in the commercial buffered agent cannot affect the pH of the gastric fluids. When laboratory tests were made of six different brands of plain acetylsalicylic acid tablets, one brand of the buffered drug, and one brand of calcium acetylsalicylate carbamide complex, no significant differences were noted between two different lots of each product. However, a marked variation in solution rates was observed in the products. Clinically noticeable differences between two products become apparent when there are pronounced differences in the dissolution characteristics of the two products. The brand of calcium acetylsalicylic acid which was tested dissolved at a faster rate than all the others, because the solution rate of sodium or calcium salt of weak acids, such as acetylsalicylic acid in liquid mediums, is much greater than that of free acid. Buffering agents can increase the solution rate of a weak acid, to a lesser extent, by providing an environment in which the weak acid would be somewhat more soluble.

The time required for a tablet to disintegrate is the time required by the tablet to fall apart into small particles, not the time required for the drug to go into solution. For example, a drug may leach through a tablet's coating, causing it to persist for some time in the gastrointestinal tract, whereas a capsule dissolves quickly and releases a fine powder which presents a large surface and rapidly dissolves, so that the drug is removed by absorption from the gastrointestinal tract.

The mode of administration is even more important than the physical form of the dose. If the drug is administered in solution, or as a fine powder in sufficient water, and only after meals when the gastric mucosa is protected by food, minimal local irritation should be expected. Conversely, acetylsalicylic acid swallowed in the form of a whole tablet on an empty stomach and without fluids is almost certain to produce serious mucosal irritation and delayed absorption.

Musculoskeletal Disorders

Disabilities of the Feet and the Need for Chiropody, Exton-Smith, A. N. Brit. J. Clin. Pract. 14: 393-97, 1960.

Improvement in the physical and mental well-being of the aged can be provided by proper care of the feet. Neglected, painful feet are a common cause of limitation of movement and curtailment of everyday activities. A survey has indicated that foot disabilities rank fourth among the common causes of disablement of the aged. They occur in the following order: ingrowing toenail, flat foot, hallux valgus, bunions and corns, arthritis, onychogryphosis, plantar warts and hammer toe. They are more common and more disabling in women than in men. Most of the lesions are minor in nature and within the scope of chiropody.

These disabilities are largely due to long-continued wearing of ill-fitting and unsuitable shoes, beginning with schoolgirls, and to degenerative changes in the tissues in old age. Abnormal pressure and irritation cause loss of fatty tissues padding bony prominences, especially those of the plantar surface under the metatarsal heads. Hypertrophy of the superficial layers of skin leads to formation of horny masses over the pres-

sure areas, and causes pain when walking or standing. Degenerative changes in the nails, together with trauma from shoes, cause onychauxis; unless treated, onychogryphosis may develop.

In a group of 120 patients with 224 lesions, the most common disorders were clawing of the toes over the flexed midphalangeal joints where the upper surface of the shoe presses on the skin; onychauxis and deformity of the nails following injury to the nail matrix, and callosities under the heads of the metatarsals on the plantar surface of the feet. Many of these lesions resulted from lack of foot care. Of these aged patients treated by chiropodists, only two were able to care for their own feet, because of arthritis of the hips, knees or spine, difficulty in bending, or because of obesity, defective vision, sepsis of the foot, or tremor of the hand.

Individuals with deformities of the feet should have orthopedic correction of bone defects before reaching the age of sixty. Skin and nail conditions arising secondary to degenerative changes should be treated. Therapy in the aged is only palliative. These persons need regular attention from a chiropodist at intervals of 6 to 8 weeks for the rest of their lives. Callosities and corns should be reduced to a painless stage, and a protective and insulating dressing should be applied to relieve pressure on those areas. Nails should be reduced in bulk and smoothed, and exfoliative tissue in the nail grooves removed. Skilled attention is necessary for aged patients with occlusive arterial disease and those with diabetes. Diabetic clinics in most hospitals have special facilities for chiropodic care of the feet of the elderly.

The National Corporation for Care of Old People (England) recommended that treatment be provided at private surgeries of chiropodists under the supervision of the Executive Councils of the National Health Service. The Corporation calculated that approximately 2,100 chiropodists could treat at 8-week intervals the 20 per cent of the aged population expected to need chiropody. Before this plan can be adopted, a closer liaison between chiropodists and members of the medical profession (as in diabetic clinics) will be necessary, and closer association with the orthopedic departments for treatment of bone deformities, to prevent development of skin disorders.

Tonic Reflexes of the Foot: Their Orthopedic Significance in Normal Children and in Children with Cerebral Palsy, Duncan, W. R. J. Bone & Joint Surg. 42A: 859-68, 1960.

Four tonic reflexes of the foot can be elicited over a broad area by stimulation of the skin of the foot at birth; normally they gradually disappear in the first years of life. If they persist, the reflex movements eventually cause the involved structures to assume the distorted attitude permanently. Such a deformity occurs commonly in patients with cerebral palsy and may occur in normal infants during the first years. Recognition and management require an understanding of the reflexes and the pathway of the reflex arc.

The reflex movements require coordinated participation of several muscles. (1) The toe-grasping reflex follows stimulation of the ball of the foot near the base of the second and third toes, causing flexion and adduction of the toes. (2) The inversion reflex, following stimulation of the medial border of the foot near the head of the first metatarsal, produces tonic inversion of the foot, usually deviating the toes toward the medial border of the foot. The prime movers seem to be the anterior and posterior muscles. (3) The eversion reflex follows stimulation of the lateral border of the foot over the head of the fifth metatarsal and the base of the little toe, producing eversion of the foot, with muscular activity occurring in the peroneals. The toes often fan out toward the lateral border of the foot. (4) The dorsiflexion reflex, following stimulation of the central portion of the plantar surface of

the heel, causes dorsiflexion of the foot, the extensors of the toes often participating. The prime mover is the tibialis anterior.

Observations are reported of 50 normal children and 8 patients with spinal paraplegia (5 were adults). In children with cerebral palsy the reflexogenous area sometimes spreads over the entire foot. Since disappearance of these tonic reflexes seems related to a suppressive effect of the maturing central nervous system, testing of the duration of the reflex movements at any age should provide an index to the maturation of this system. The deforming potential seems to arise from dominance of a single reflex, which when triggered by environmental stimuli distorts the foot repeatedly until eventually the abnormal position becomes fixed.

When serial testing with a vibrator indicates no lessening in duration and intensity of the deforming reflex, artificial suppression of the reflex may seem desirable. Three methods are described: (1) Temporary interruption by blocking the reflexogenous area by use of ethyl chloride spray or by procaine infiltration; (2) counterstimulation of a reflex which is antagonistic to the deforming reflex; (3) altering the tonic reflex by tenotomy of the prime mover. It may be that during the immediate postoperative period, while the prime mover is temporarily ineffective, the supraspinal center establishes suppressive control.

These well-arranged tonic reflexes appear to facilitate balancing in stance and gait. These slow reflex movements may be a summation of many instantaneous reflexes, which are distally located trigger mechanisms that initiate balancing reactions.

Treatment of Disease or Trauma of Muscles and Joints, Ernst, E. M. Pennsylvania Med. J. 63: 708-11, 1960.

Satisfactory clinical improvement can be obtained in patients having acute or chronic inflammatory conditions of the muscles and joints by administration of very low doses of an adrenal steroid, in combination with other antirheumatic agents. Delenar®[1], a combination of dexamethasone, orphenadrine hydrochloride, and aluminum aspirin given to 52 patients, most of whom had muscle spasm and limitation of functional ability in the affected extremities, provided either complete relief or major improvement, usually within one week, in all but 3 patients—one patient with arthritis and two with lumbosacral strain. Patients with chronic, reasonably well-controlled rheumatic arthritis were not included in this study.

The initial dosage was one to two tablets four times a day, according to the severity of the symptoms. The dose was cut in half as relief of symptoms began. When maximal relief was obtained, the drug was discontinued. The average duration of administration was 1 week; the maximum was 3 weeks. Except for 2 patients who received ultrasonic diathermy, the patients received no other antirheumatic therapy. Delenar proved more effective than a combination of prednisolone and meprobromate previously given 4 patients, and more effective than salicylates given 2 patients. Adverse side effects did not follow Delenar therapy, since only 1 to 2 mg. were administered daily. Such after effects arise only when at least 6 mg. are given daily.

®[1]Schering

Recurrent Subluxation of the Ankle Joint, Stonham, F. V. Med. J. Australia 1: 44-45, 1960.

In cases of recurrent subluxation of the ankle joint, the talus on palpation over the front part of the joint seems tilted on inversion, and may move forward. Radiographic study shows inward rotation of the talus on forced inversion, and often an avulsion of the tip of the lateral malleolus. Anesthesia may be necessary if the ankle is very painful, in order to obtain sufficient inversion to demonstrate the tilting of the talus. This condition occurs chiefly in sub-

luxation of the talus, a common occurrence in women. A lateral giving away, produced by high or worn heels, can cause recurrent sprain of the lateral collateral ligament. Injury of this ligament should be considered in all inversion injuries, and the ankle radiologically examined for undue mobility of the talus. Treatment consists of immobilization of the foot in plaster, continued until severe pain and tenderness are gone.

The instability in cases of less severity and frequency is treated by fitting the patient with boots with the heel splayed or "floated" laterally and strongly reinforced with nails to limit wear. Surgery is advised when the instability can be controlled only with an iron. Physiotherapy, manipulation, and exercises to strengthen the peroneal muscle fail to help. A simple, rapid tenodesis is described which will control the instability completely and prevent recurrence.

A 6-inch incision is made, parallel with the peroneus brevis tendon 1 cm. behind it, and the skin and subcutaneous tissues anterior to the tendon reflected forward, exposing the fibula's lower end. Incision is made into the deep fascia and peroneal reticulum, and the peroneus brevis tendon stripped from the muscle and cut from 3 to 4 inches above the fibula's lower extremity. A hole is drilled into the lateral malleolus from behind, forward and downward; the tendon is passed through the hole, pulled taut, and sutured to the distal part of the tendon. After suturing the cut area of the muscle to the peroneus longus, the wound is closed. A plaster cast is worn for 3 weeks. Walking begins after a few days of non-weight bearing.

Stress Fracture of the Calcaneus, Mattingly, S. Ann. Phys. Med. 5: 211-12, 1960.

Stress fractures of the calcaneum are observed in military recruits, and are the result of excessive marching and jumping over obstacles. They frequently go unnoted. Onset of symptoms may be gradual or sudden, with swelling over the medial and lateral aspects of the calcaneus and local tenderness. After the second to fourth week radiographs may show a dense line of sclerotic bone in the calcaneus, anterior and parallel to the posterior margin. These stress fractures may be bilateral or even multiple. Differential diagnosis should include tenosynovitis, arthritis of the ankle and subtaloid joints, contused heel, and neurosis. Therapy consists of rest from weight bearing, a few days in bed, then walking with elbow crutches for one or two weeks, with the heel cushioned by a sponge-rubber pad. Recruits should not return to full duty for two months, or the symptoms may recur.

The Lower Extremities, the Oral Cavity, Their Co-Relationship to Systemic Pathology, Goldy, H. M. Bull. Passaic Co. Dent. Soc. 22: 5-7, Nov. 1960.

The oral cavity, like the foot and leg, often mirrors pathologic disorders in other parts of the body. Practitioners should develop an integrated approach that takes into consideration the complete health picture of the patient. In the present article the author lists the various symptoms and clinical findings to be noted in many types of systemic disease, observed in the mouth and in the lower extremities. Until recent years many teeth were extracted because of focal infection which was believed to cause systemic diseases. Today diseases in the lower extremities and other parts of the body, which are due to dental infection, are being treated locally, without thought of the etiologic dental infection.

Among the systemic disorders which present symptoms in the mouth and the lower extremities are the following: glandular disturbances of the thyroid, parathyroids and pituitary; deficiencies in vitamin C, D, and B complex; allergies and poisonings such as angioneurotic edema, arsenical keratosis, drug sensitivities, lead poisoning; urinary diseases, including diabetes and nephritis; blood dyscrasias such as leukemia, agranulocytosis, anemias; new growths, for example, multiple myeloma, xanthoma, sarcoidosis and metastatic tumors; among the infectious diseases are tuberculosis,

syphilis, and infectious mononucleosis. Many skin diseases exhibit symptoms in mouth and lower extremities: purpura, erythema, pemphligus, lichen planus, scleroderma, actinomycosis, moniliasis. Pregnancy, trichinosis, multiple sclerosis are also manifested in those areas. Perhaps the most frequently noted are the symptoms manifested in the mouth and extremities of diseases affecting the bones, joints and muscles—myasthenia gravis, muscular dystrophy, osteogenesis imperfecta and various anomalies—but particularly the rheumatic disorders, rheumatoid arthritis, pyogenic arthritis, and osteoarthritis. These related symptoms are briefly described and are helpful in diagnosis and therapy.

Prevention and Treatment of Ankle Sprains, Paul, W. D., Amer. Acad. Gen. Pract., 11th Ann. Conf., San Francisco, April 6, 1959, pp. 208-209.

An increasing participation in sports is causing a high incidence of sprains and strains. Even if minor, they can cause considerable disability and loss of time. These injuries may be avoided by proper use of taping and bandaging of the ankles. In diagnosis of sprain the history should state the time and manner of trauma, amount of swelling, pain and distortion, together with information regarding earlier injuries to the ankle and any sensitivity to tape. In the clinical examination, deformity, swelling and discoloration are noted. Palpitation will reveal any crepitation or abnormal mobility. X-rays should be taken if possible.

Therapy in general consists of (1) injection into affected area with 1 per cent procaine and hyaluronidase (150 T.U. to each 10 cc. of procaine; (2) cold applications during the first few hours; (3) use of buffered aspirin as needed, and, later, progressive-resistive exercises. For a sprain with *mild* local swelling, tenderness and pain, with no abnormal motion and scarcely any pain on motion, with negative x-ray findings, treatment consists of strapping with basket weave, ambulation allowed, reinjection on second day if pain becomes severe, and use of hot packs after the first day. Alternative therapy can be use of Trainer's hot pack, Freon spray, paraffin baths, whirlpool baths, contrast baths, diathermy, ultrasound and electrical stimulation.

For sprain with *moderate* to severe swelling and tenderness, diffuse pain, normal motion painful but not abnormal, negative x-ray findings, definite therapy consists of application of elastic bandage or Trainer's hot pack; walking with crutches for 24 to 48 hours; begin ultrasound therapy (1.5 watts/cm.^{2} for 5 minutes, stroking technic, or 1.0 watts/cm.^{2} for 5 minutes under water; on the following day if pain is severe, reinjection; if the swelling has gone, strapping is done and ambulation begun, but if the swelling is severe, use of crutches is continued. Strapping is continued during walking for 7 to 14 days. Alternative therapy is the same as for mild sprain.

For sprain with *severe* swelling and pain, abnormal motion, and severe pain with passive normal motion, and x-ray indications of widening of ankle mortise and/or chip fracture, definite therapy is immediate and consists of wearing of a plaster walking boot for 3 to 4 weeks, and later of protective strapping during walking. Alternative therapy consists of surgical repair of complete ligamentous tears very early, before the ligaments shorten; then after surgery, wearing of a walking cast for 10 to 14 days, and subsequent use of protective strapping and exercises.

New Growths

Warts, Moles and Malignancies, Andrews, G. C., and Domonkos, A. N. Texas J. Med. 55: 568-70, 1959.

Pigmented benign lesions are of varied types. The pigmented seborrheic keratosis (wart), a benign, greasy, scaly excrescence, solitary or multiple, sometimes growing to considerable size, is easily diagnosed. Senile is its horny appearance. A histiocyoma may be pigmented and be confused with

melanoma; it occurs on the extremities during middle age. A pigmented basal cell epithelioma is distinguishable from melanoma by its waxy elevated margins. From a discrete pinhead-sized nodule it gradually enlarges; if a crust forms and is knocked off, bleeding may occur. The pigmented nevus resembles melanoma: if crusts form or bleeding develops, the lesion is probably a melanoma. Pigmented hairy nevi rarely develop into melanoma; usually they occur on the feet, hands and genitalia. They are known to be junction type nevi keratosis may resemble epithelioma or melanoma; a distinguishing characteristic and therefore excision is advised, particularly in the presence of keratinization, crusting or bleeding. Melanoma only rarely develop from blue nevi.

Melanomas may or may not be malignant. The so-called juvenile melanoma can be cured by local excision, although histologically it is malignant. In 50 per cent of cases there are numerous giant cells formed by synecytial accumulations of melanoblasts. The melanotic freckle (lentigo maligna) is a slow-growing melanoma

Nonpigmented melanomas are difficult to diagnose. They are especially malignant in young adults. The degree of malignancy of the melanoma depends largely on the age of the patient and the amount of sex hormones present. Prognosis is best before puberty and in elderly women. The site of a melanoma is important. Prog- and hard to diagnose. Subungual melanomas are usually misdiagnosed and treated for months or years as a fungus infection. It is slow-growing and when recognized in time cure is possible by amputation of the digit. The outlook is hopeless if adenopathy develops in the axilla. Biopsy is advisable if the diagnosis is uncertain. Complete excision is preferable if it looks suspicious.

Incidence of Melanocytic Nevi in Young Adults, Stegmaier, O. C., and Becker, S. W. J. Investig. Derm. 34: 125-29, 1960.

A total of 1,090 lesions which appeared to be melanocytic nevi were removed from 20 volunteers. This included all pigmented macular and papular lesions, except freckles, and all non-pigmented papilloma. Of these, 78 per cent were macular; 18 per cent slightly elevated; only 4 were elevated more than 2 cm. above the surface of the skin. The lesions were classified histopathologically. Where there was a nest or cluster of five nevus cells at the epidermal-dermal junction the lesion was considered a junction nevus (343 in all); otherwise, a lentigo (210). Freckles were differentiated from lentigines on the basis of pigment formation and acanthosis. Melanin in the corneum indicates that the melanin was produced within the past two weeks. Lesions with little or no melanin in the stratum corneum were classified as freckles. When sacs of nevi cells existed at the epidermal-dermal junction and more than 25 per cent of the nevus cells were in the cutis, the lesions were considered junction nevi. If more than 25 per cent were confined to the cutis, the lesions were called compound nevi (189). When the nevus cells were confined to the cutis and no significant junctional proliferation was present, the lesions were classified as dermal nevi (283). Lesions without nevus cells and showing no characteristics of lentigens, including freckles, can be listed as miscellaneous (65).

The frequency of nevi distribution was 14 to 80 per person (an average of 40 per person). Of the junction nevi (343), 29 were considered inactive and 19 quiescent. The largest number was located on the upper extremity (345); 135 were on the lower extremities—only 5 were on the palms and soles. Junctional proliferation had taken place in 65 per cent of all nevi, including the 5 on the palms and soles, or 73 per cent in all if the lentigens are included. No evidence of fat infiltration was found in the dermal or compound nevi.

Most of the nevi included in this study were smaller than those routinely observed by pathologists, for they were too small to cause the patient any concern. However, size is no index to the type of lesion, since the smallest nevi may be of any type. This is important to remember, since over 50 per cent of the nevi showed junctional proliferation.

Surgery

Preoperative Medical Evaluation of the Surgical Patient, LeWinn, E. B., and Greenstein, S. Surg., Gyn. & Obst. 109: 344-350, September 1959.

Internist, surgeon and anesthesiologist as a team can have a major success impossible to one of them working alone. Though the anesthesiologist decides which anesthetic agent shall be used, the internist knows best the patient's overall physical status and his reaction to certain drugs. He knows the stresses and problems of the patient which surgery may precipitate or exaggerate. Intimate knowledge of both the emotional and physical characteristics of the patient may insure a smooth, uncomplicated surgical procedure and postoperative course. Careful study of medical problems may prevent serious complications. Unless emergency surgery is necessary, preoperative urinalysis and complete blood studies should be made; in elective cases, blood urea nitrogen or NPN and blood sugar levels are desirable. Some surgical procedures call for preoperative information regarding liver, heart and lungs to clarify questions raised by the history and clinical examination. Assessment of the patient's cardiovascular status is most important, as 70 per cent of surgical patients have such complications. The electrocardiogram may be normal in patients with valvular, coronary artery or myocardial disease, because these symptoms may be overshadowed by those of the disease demanding surgery. Anesthesia stress, the operation itself, and postoperative conditions may change a subclinical cardiac problem to major complications. The increasing incidence of anginal pain or cardiac dyspoea points out the need for intensive therapy before surgery is performed.

Consideration must be given to the status of peripheral circulation, history of intermittent claudication, and size of the heart as revealed clinically and radiologically. Also the cardiac rate and rhythm and premature beats. Search must be made for evidence of cardiac decomposition and hepatic congestion. This delay of operation is not important in many cases. The internist can assure the surgeon that certain electrocardiographic abnormalities do not indicate a poor surgical risk, for example, left bundle branch block or old myocardial infarction. The electrocardiogram will provide information regarding functional status of the heart, cardiac rhythm and impulse transmission. In an elderly patient the only clues to heart disease may be multifocal ventricular premature heartbeats or frequent atrial premature beats. The possibility of further block and cardiac arrest during surgery may be indicated by findings of sinotrail nodal block, nodal rhythm, or atrioventricular nodal block.

Preoperative evaluation of the patient's renal status may be difficult if renal disease is not extensive. The patient may be unaware of subtle changes, confusing their symptoms with those of gynecologic or prostatic disease for which surgery is planned. A patient with renal functioning adequate for ordinary living may show an inadequacy during surgery, and the increased postoperative load of nitrogenous products and electrolytes beyond his capacity to excrete. A significant decrease in renal reserve may be assumed in certain diseases and measures taken to correct anemia, avoidance of excessive preoperative medication and guarding against minor hypoxic and hypotensive states during operation. Surgical procedures should be limited to essentials. Thought should be given to how the kidneys will function in cases of major hypertension, a history of coronary artery or cerebral vascular disease, or diabetes. Laboratory studies should include urinalysis, blood urea nitrogen or NPN levels. More than a trace of albumin should demand routine study of renal function.

The preoperative evaluation of a patient, therefore, is to discover any heart condition and to assess the patient's ability to withstand the stress of surgery and anesthesia, and to determine the success of measures taken to increase that ability.

Organization News

Secretaries of local, state, regional, affiliated, subsidiary and other relatea organizations are invited to submit copy for these columns.

Canada

The 36th annual meeting of the Canadian Podiatry Association featured Dr. Earl Kaplan as main speaker on August 18-20, at the University of British Columbia in Vancouver. Lecturers at the seminar included faculty members tof the university.

The first award presented by the Canadian Podiatry Association to a Canadian podiatrist for outstanding service to the profession was presented to Jack I. Gorosh of Vancouver.

Elected to office were: Wilfred Laine, Toronto, President; Les Hurwitz, re-elected as Executive Secretary; Ralph Shepherd, Victoria, B. C., Treasurer.

New Mexico

New Mexico's second annual postgraduate seminar sponsored by the Bernalillo County Podiatry Society will be held January 12-14, 1962 at the University of New Mexico, Albuquerque, N. Mex. Featured lecturer will be Raymond Locke of Englewood, N. J.

A.A.H.P.

At the annual meeting of the American Association of Hospital Podiatrists on August 28, 1961 at the Americana Hotel, Bal Harbour, Florida, the following officers were elected: Merton M. Hershman, Schenectady, N. Y., President; William E. Ellison, Tampa, Florida, 1st Vice President; H. Charles Lilienfeld, New York, N. Y., 2nd Vice President; Louis J. Arancia, Brooklyn, N. Y., Executive Secretary-Treasurer.

"LIFE'S FOUNDATION — YOUR BABY'S FEET" is an outstanding and comprehensive booklet on the growth and care of children's feet. Written for the layman, it is concise, cleverly illustrated and will prove valuable especially to the parents of young children. Many Podiatrists-Chiropodists have received a copy of this booklet and have ordered them in quantity. For those of you who have not ordered and for those who wish to reorder, please clip the order blank below and mail with your check for your supply.

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Texas

Meeting of the West Texas Chiropody Association will take place in El Paso, Texas, October 28-29, 1961, at the Hilton Hotel. Speakers will include James W. Hembree, Lester Walsh and William Gaddis.

Communication From The Profession

To the Editor

For the past few years, North Dakota podiatrists have been trying to lead a van of followers through the education field of our profession. The state has increased its scope of practice and has much to offer the initiate desiring to practice in our state.

Many talks have been given regarding the profession and what it has to offer both the practitioner and the "foot-sufferer." Our state legislators know of our profession and bit by bit the profession is coming out of the stigmatism of "corn-cutter" into the full-fledged position of "Doctor" as regards podiatry, the specialty dealing with feet.

The podiatrists of the state have long felt the pulse of the public, and have found several things wanting in our "great leap forward" as regards the profession. First and foremost is the length of time that a person must attend a recognized college of chiropody, in order to arrive at a degree.

I, for one, have discussed this matter with other practitioners in the field and find that they, too, wonder if the length of years is a real necessity to the training of a podiatrist. The podiatrists of North Dakota have espoused for the past 6 years, that our academic years be cut to 5; that the registering students be high school graduates with a good background of sciences; that the professional podiatry college give 5 years of work, the student attending classes all but approximately 1 month out of the year

In Self Defense,

An additional Foot Facts pamphlet, **Surgery of the Foot,** is now available. The demand through the mails has increased. Attending conventions for the past two or three years has had its hazardous moments. All sorts of friendly threats have been hurled — all ending with, "When is the one on foot surgery coming out?" It is now here awaiting your perusal and use.

Patient Education is an art. **Surgery of the Foot,** as the other ten Foot Facts subjects, is a Patient Education pamphlet. At **every** stage of practice there is an almost compelling need for the podiatrist to "up-grade" his patient's foot knowledge. These booklets have proven successful in increasing income by helping the foot specialist to develop this art.

For those who have forgotten the titles and text of these clear, concise pamphlets—a request will bring you the complete series by return mail. Read them carefully. Order those you feel will best fit your mode of practice. Quickly you will learn why the only complaint after distributing 1½ million booklets during the past seven years has been, "The pamphlets leave the office too fast." And it could be truthfully added, "Often bringing back another good patient with them."

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for the 5 years; that the graduate be given a B.S. in science and a D.S.C. (P) at the terminal time.

This plan is heartily endorsed by many practitioners, both from North Dakota and other states in this region. However, the plan meets with not one bit of enthusiasm from any of the educators in the podiatry field.

Now medicine has seen fit to start the ball rolling. Medicine will, starting this year at Northwestern, give a 6-year course, leading to the degree of M.D. The "holy-cow" attitude when speaking of an 8-year course to the Doctor of Medicine degree, has been put in the barn. Medicine must, it is felt, hasten its study course in order to interest pupils and to get practicing physicians out into the field. Now where does podiatry stand? We are still requiring 6 years to be a "foot-doctor." Let's get practical for a change and consider things from the standpoint of the student.

T. W. Cockrell, D.S.C.
Minot, N. D.

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Women's Auxiliary Message

The annual meeting of the Women's Auxiliary of the American Podiatry Association was held in Miami Beach, August 27-28. The reports of the chairmen and the actions taken by the delegates show the vast accomplishments the Auxiliary has made and plans to achieve in the coming year.

Objectives were thoroughly reviewed and it was concluded that the Auxiliary could become a very important arm of the A.P.A. With this in mind, closer liaison was established through the appointment by Dr. Robert Shor of Dr. J. Conforti as liaison officer between the A.P.A. and the Auxiliary. The Auxiliary will go forward in every endeavor to assist chiropody-podiatry through the instrumentation of the professional organization.

A major step in this direction was taken with the establishment of the Emergency Student Loan Fund. This fund, to be administered by the Auxiliary, in cooperation with the A.P.A. and chiropody-podiatry schools, will meet a long-felt need. It was pointed out at our meeting that students at times find themselves in temporary financial distress and it behooves our Auxiliary to help the profession; what better help than to begin with the podiatry-chiropody student. The committee is being set up and will shortly begin to function.

Our national project, "Life's Foundation, Your Baby's Feet," is self-supporting and well accepted. We will continue to give

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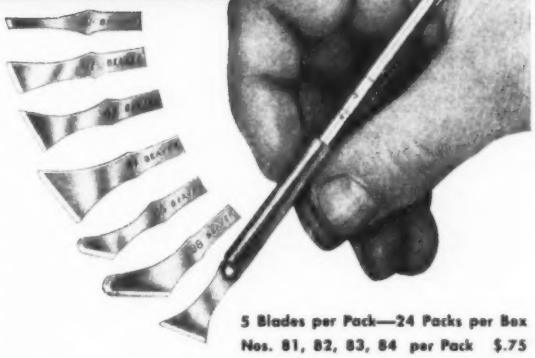

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SURGICAL KNIVES BY Rudolph Beaver

WALTHAM 54, MASSACHUSETTS

financial support to the Fund for Advancement of Podiatry-Chiropody Education. The Student Association of the A.P.A. requested funds to assist with their publication and this was granted.

It is obvious that the Auxiliary is a real help to the profession and can go to even greater heights in its accomplishments. We need your help and we appeal to all men in the organization to send their wives, mothers and/or daughters to join the promotion of their profession through the services of the Auxiliary.

Officers for the coming year are: Mrs. Fred G. Broun, Chicago, Ill., President; Mrs. Joy E. Adams, St. Petersburg, Fla., 1st Vice President; Mrs. Bruce Wright, Battle Creek, Mich., 2nd Vice President; Mrs. C. H. Wunderlich, Kirkwood, Mo., Secretary-Treasurer.

Helene Broun, President

Deaths Reported

Edward Tornow
Los Angeles, Calif.

Russell A. W. Poindexter
Philadelphia, Pa.

Dr. Poindexter, son of Dr. Joseph Poindexter of Elgin, Illinois, was killed in an accident in Korea while serving as a podiatrist in the United States Army. He graduated from Temple University, School of Chiropody, in June 1952 and practiced in Philadelphia for 6 years before entering service. Interment was in the National Cemetery, Florence, South Carolina, August 7, 1961.

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SALEM PHARMACEUTICALS **Naugatuck, Connecticut**

Podiatry Exhibits at A.M.A. Meeting

The annual scientific meeting of the American Medical Association was held at the Coliseum in New York, in June 1961. There were 23,000 physicians in attendance and their 30,000 guests. Podiatry was represented by two outstanding exhibits.

The first exhibit, consisting of four panels which attempted to classify "The So-Called Ingrown Nail" and "The So-Called Plantar Wart," was prepared and presented by Dr. Marvin Shapiro of Toledo, Ohio. Through the use of numerous photographs, transparencies and line drawings, Dr. Shapiro illustrated the different types of nail problems often misdiagnosed as ingrown toenails. Included in the differential diagnosis were inverted nail, involuted nail, onychogryphotic nail, hypertrophied nail flap, subungual exostosis and granuloma. Treatment for each was outlined. The second aspect of the presentation pertained to "The So-Called Plantar Wart." Here Dr. Shapiro classified the different types of warts seen on the foot and showed other hyperkeratotic lesions which might simulate a wart.

Of the more than 400 exhibits at the convention, I would venture to say that Dr. Shapiro's was one of the more popular. He was bombarded by questioning physicians from the time the Coliseum opened its doors to the final hour. Brochures were available, explaining the background and training of a podiatrist and his work in the hospitals as part of the medical team. I might add, the theme of the meeting was "Teamwork in Medicine." (Editor's Note: Dr. Marvin W. Shapiro has presented his exhibit to the American Podiatry Association as an addition to its Audio-Visual collection of exhibits.)

A second exhibit entitled "Conservation of The Diabetic Foot" was presented by Drs. Jerome Shapiro and Donald Lyons, Podiatry Department, Georgetown University Hospital, in conjunction with Drs. James Moss and DeWitt Delawter, Diabetic Department, Georgetown University Hospital. The exhibit consisted of four panels. The first panel explained, through the use of numerous drawings, why the diabetic foot is vulnerable. Listed were such factors as inadequate blood supply, inadequate nerve supply, inadequate mechanical function, inadequate vision, decreased resistance to infection, obesity and osteo-

arthritis producing an inaccessible foot. Panels two and three consisted of 30 large 10x12 color transparencies of problems encountered in the podiatry clinic which have resolved through conservative management. Panel four explained the responsibilities of the podiatrist patient and physician in the prevention and treatment of foot complications in the diabetic patient. Included in the responsibilities of the podiatrist were: examination and education; treatment of corns, calluses and nails; debridement of ulcers; weightbearing redistribution and correction of deformities. The theme of the exhibit was that through programs of intensive foot care of minimal foot lesions, most problems in the diabetic foot can be prevented. On display was included a set of podiatry instruments. This exhibit will also be shown at meetings of the District of Columbia Medical Society in Washington, The Virginia Medical Society in Richmond, The Southern Medical Association in Dallas, The American Academy of General Practice in Las Vegas and the American Podiatry Association in Washington in 1962.

As a neophyte in the ranks of podiatry, I, of course, was very excited to represent my profession at the largest conclave of physicians ever to have assembled at one time in one place. It was a rewarding experience for me and, I think, for the profession. The reaction was excellent. I would estimate that approximately 15,000 saw the exhibit and their interest was gratifying.

Over the 5-day period, many interesting questions were asked and many comments made. Although our exhibit pertained specifically to the diabetic foot, many physicians questioned us on ingrown toenails, plantar warts and athlete's foot. Our instruments also generated much interest and a frequent question was, "Where can I acquire some of these?" Another frequent comment was, "I think we should have a podiatrist in our clinic. How can we go about acquiring one?"

I feel that podiatry was benefited a great deal by its representation at this meeting. Physicians were able to come in contact with podiatry and see the work that is being done in our offices and in the hospitals.

Jerome Shapiro, Pod.D.
Consulant in Podiatry, Georgetown University Hospital
Assistant in Medicine, Georgetown University School of Medicine

Dates to Remember

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Youth Foot Care Week

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Fiftieth Annual Meeting

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Region Five
(Ill., Ind., Mich., Wis.)
Midwest Podiatry Conference
Chicago, Ill., Mar. 16-18, 1962
Sheraton-Chicago Hotel
Dr. Earl G. Kaplan
14608 Gratiot Ave., Detroit 5, Mich.

Region Six
(Colo., Iowa, Kan., Minn., Mo., Nebr., N. Dak., S. Dak.)
Minneapolis, Minn., May 25-27, 1962
Hotel Raddisson
Dr. W. J. Olson
322 Midland Bldg., St. Paul, Minn.

Region Seven
(Idaho, Mont., Ore., Wash., Wyo.)

Region Eight
(D. C., N. C., S. C., Va., W. Va.)
Washington, D. C., Nov. 10-12, 1961
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Charles Turchin, Chairman
818-18th St., N.W., Washington, D. C.

Region Nine
(Florida)
Joy E. Adams
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Region Ten
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Birmingham, Ala., Oct. 20-22, 1961
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Region Eleven
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Chiropody Society of Texas
407 Austin Savings Bldg., Austin, Texas

Region Twelve
(Ariz., Cal., Nev., Utah)
Las Vegas, Nev., May 25-26, 1962
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Mood Elevators

Contributions to this column are more than welcome. In fact it depends upon them. A.O.P.

A girl may be ignorant and shapely but she is never ignorant of the fact that she is shapely.

———

Ole Man River Says,

"Too many people respect old age only when it's bottled."

———

"The man who doesn't have a fault, probably doesn't have a wife either."

———

"If your shoes pinch, remember there are 112 taxes hidden in them."

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"Spring, once announced by the first bare toes in the schoolroom, is now heralded by the first bare midriff in the supermarket."

———

When women kiss, it reminds me of prize fighters shaking hands.

DR. POD

"Next time you feel the urge to play football, Jack, give me a call and I'll bring the chess set right over!"

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